COMMUNICATION

Archisepsis scabra (Loew 1861) (Diptera: Sepsidae), NEW HOST FOR THE PARASITOID *Triplasta coxalis* (Ashmead, 1865) (Hymenoptera: Figitidae: Eucoilinae) IN BRAZIL

Archisepsis scabra (Loew, 1861) (Diptera: Sepsidae), novo hospedeiro para o parasitóide *Triplasta coxalis* (Ashmead, 1865) (Hymenoptera: Figitidae: Eucoilinae) no Brasil

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ABSTRACT

The aim of this study is to report the first occurrence of the parasitoid *Triplasta coxalis* (Ashmead, 1865) (Hymenoptera: Figitidae: Eucoilinae) in pupae of *Archisepsis scabra* (Loew, 1861) (Diptera: Sepsidae) in cattle dung in Brazil. The experiment was carried out in Monte Alegre, MG. One obtained the pupae through the flotation method. They were individually placed in gelatin capsules until the emergence of the adult dipterous or their parasitoids. Fourty seven pupae of *A. scabra* were obtained, two of which yielded the parasitoid *T. coxalis.* The percentage of parasitism was 4.3%.

Index term: Biological control, cattle dung, natural enemy, parasitism, *Triplasta*, *Archisepsis.*

RESUMO

Objetivou-se, no presente trabalho, relatar a primeira ocorrência do parasitóide *Triplasta coxalis* (Ashmead, 1865) (Hymenoptera: Figitidae: Eucoilinae) como inimigo natural de *Archisepsis scabra* (Loew, 1861) (Diptera: Sepsidae) em fezes bovinas no Brasil. O experimento foi realizado em Monte Alegre, MG. As pupas foram separadas pelo método de flutuação e individualizadas em cápsulas de gelatina onde foram mantidas até a emergência dos dípteros e/ou dos parasitóides. Obtiveram-se 47 pupas de *A. scabra*, das quais emergiram dois parasitóides pertencentes à espécie *T. coxalis*. A porcentagem de parasitismo foi de 4,3%.

Termos para indexação: Controle biológico, fezes bovinas, inimigo natural, parasitismo, *Triplasta*, *Archisepsis.*

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Cattle feces that accumulate on pastureland and in cowsheds constitute a microhabitat that is especially favorable for the development of an arthropod fauna. Such habitats provides conditions for the appearing of various groups of insects (MARCHIORI & LINHARES, 1999). Among these insects are species of flies that have medical-veterinary importance, since they may act in carrying pathogens to man and animals (CARVALHO et al., 2003). This association occurs because these flies exploit organic substances and residues that are produced by human and animal activity, especially feces and plant residues (MARCHIORI, 2002; MARCHIORI et al., 2000, 2002).

Parasitoids are the most important biological control agents and they are responsible for the majority of the economic and environmental benefits produced by biological control programs. The parasitoids that occur in dung are responsible for reducing the populations of Diptera (MARCHIORI & LINHARES, 1999).

The objective of this study was to describe the first occurrence of *Triplasta coxalis* (Ashmead, 1865) (Hymenoptera: Figitidae: Eucoilinae) as a parasitoid of *Archisepsis scabra* (Loew, 1861) (Diptera: Sepsidae) in Brazil.

The experiment was carried out at the Igarapé Farm in Monte Alegre, Minas Gerais. Fresh feces were marked, immediately after their emission on pastureland, with the aid of white wooden stakes, so that the precise age of the feces could be determined. They were left in the field for a fortnight. Subsequently, nine of them were collected and taken to the laboratory of Instituto Luterano de Ensino Superior de Itumbiara, Goiás, for extraction of the pupae using the flotation method (MENDES, 1996). Together with

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the feces, 5 cm of substrate situated beneath the place of deposition on the soil were collected. The pupae were removed with the aid of a sieve, counted and individually placed in gelatin capsules (number 00). They were left there until the emergence of the flies or their parasitoids. The parasitoids that emerged were conserved in 70% alcohol. They were collected an 72 plates of feces samples (two collections/ month) between March and June 2006.

The identification of the parasitoids was performed using the identification key proposed by Díaz et al. (2000) and the identification of the hosts was based on Amaral (1996). The percentage parasitism was calculated according to the number of pupae parasitized/ total number of pupae collected x 100.

Fourty seven pupae of *A. scabra* were obtained, two of which yielded the parasitoid *T. coxalis*. The percentage of parasitism was 4.3%.

In Itumbiara, Goiás, *Spalangia drosophilae* Ashmead, 1885 (Hymenoptera: Pteromalidae), *Spalangia nigroaenea* Curtis, 1839 (Hymenoptera: Pteromalidae), *Trichopria* sp. (Hymenoptera: Diapriidae), *Paraganaspis egeria* Díaz, Gallardo & Walsh, 1996 (Hymenoptera: Figitidae) and *Triplasta atrocoxalis* (Ashmead, 1895) (Hymenoptera: Figitidae) were found as natural enemy of *A. scabra* (MARCHIORI, 2006). In the same locality, as well as in Cachoeira Dourada, Goiás, *T. coxalis* was found parasitizing *Palaeosepsis* spp. (Diptera: Sepsidae) in cattle feces on pastureland (MARCHIORI, 2002; MARCHIORI et al., 2001, 2002).

Since the use of chemical substances for fly control may cause damage to the environment and also to human and animal health, the search for efficacious natural enemies may be a viable alternative for biological control programs over a long term.

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