New habitat and host in Trichopria sp. (Hymenoptera: Diapriidae) in Brazil.

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Abstract

This study reports new habitat and host for the parasitoid Trichopria sp. (Hymenoptera: Diapriidae) which were collected from pupae of Peckia chrysostoma (Wiedemann) (Diptera: Sarcophagidae) by means of traps containing some bovine kidney baits in Lavras, Minas Gerais, Brazil, in December of 2003. It was collected a total of 41 specimens of the parasitoid Trichopria sp. from 155 pupae of P. chrysostoma. The percentage of parasitism was 0.65%. This study reports the first occurrence of Trichopria sp. parasitizing P. chrysostoma in kidneys, in Minas Gerais, Brazil and superparasitism in species of the genus Trichopria.

KEY-WORDS: Diptera, Hymenoptera, Diapriidae, bovine kidney, Lavras, | Minas Gerais.


Introduction

Flies are of fundamental medical and veterinary importance, since they can produce myiasis and act on the transmission of pathogens to humans and animals. (CHOW, 1940; GREENBERG).

Chemical control of insects in urban and rural environment is complicate due to the danger of contamination of man, animals and environment. Therefore, the biological control of flies using parasitoid meets the search for alternatives to the problem, as it is a safe method, easy to handle and low cost (ALESSANDRA et al., 2003).

Trichopria species are usually immature parasitoids of Diptera (LEGNER et al., 1976). Trichopria sp. It is cited in the literature as an important parasitoid of Sarcophagidae, Sepsidae, Muscidae and Calliphoridae (FIGG et al., 1983; BLUME, 1984). DE SANTIS (1980)
cites 11 *Trichopria* species in Brazil found in the states of Rio de Janeiro, Sao Paulo, Pará and the Federal District. MARCHIORI et al. (2000a) found *Trichopria* sp. In Minas Gerais and Goiás, with this, the knowledge of the geographic distribution of this species to Brazil was expanded.

The purpose of this study is to report a new habitat and host for *Trichopria* sp. in Brazil. The experiment was carried out at the Federal University of Lavras Campus (18º25´S - 49º13´W).

**Materials and Methods**

The flies were collected by using traps, made of dark cans measuring 19 cm in height and 9 cm in diameter, with two openings resembling blinders, located in the lowest third of the can, to allow flies to enter. The top of the can was connected to a nylon funnel that was open at both ends, with the base pointing down. This was wrapped in plastic bags, so that when they were removed, the flies and parasitoids could be collected. The following items were used as baits cattle liver which were placed inside the cans, over a layer of earth. Ten traps were used and they were hung on trees at a height of one meter above the ground, two meters apart from each other.

The insects collected were taken to the laboratory, sacrificed with ethyl ether and kept in 70% alcohol for further identification. To obtain the parasitoids, the contents of the traps were placed in plastic containers with a layer of sand for use as a substrate for transformation of the larvae into pupae. This sand was sifted after being in the fields for 15 days and the pupae were extracted from it and were individually placed in gelatin capsules (number 00) in order to obtain the flies and/or parasitoids.

The percentage parasitism of each parasitoid species was calculated by means of the number of pupae parasitized per species of parasitoid, divided by the total number of pupae from that host, and multiplied by 100.

**Results and Discussion**

In December 2003, 155 pupae of *Peckia chrysostoma* (Wiedemann) (Diptera: Sarcophagidae) were obtained, from which 41 specimens of the parasitoid *Trichopria* sp. (Hymenoptera: Diapriidae) from a single puparium. In this case a characteristic of the Hymenoptera Parasitica called superparasitism occurred. Superparasitism several individuals of a kind of parasitoids may develop in a host. The percentage of parasitism obtained was 0.65%, probably due to variations in the quality and availability of food.
resources and or by the densities of the hosts.

*Trichopria* sp., in Minas Gerais and Goiás, was found parasitizing *Brontaea quadristigma* Thonsom, (Diptera: Muscidae), *Coproica* sp. (Diptera: Sphaeroceridae), *Haematobia irritans* L. (Diptera: Muscidae), *Palaeosepsis* spp. (Diptera: Sepsidae) and *S. occidua* in cattle feces on pastures behaving as a solitary parasitoid (MARCHIORI & LINHARES, 1999; MARCHIORI et al., 2000a; MARCHIORI et al., 2000b; MARCHIORI et al., 2001; MARCHIORI, 2002; MARCHIORI et al., 2002).

This study reports the first occurrence of *Trichopria* sp. parasitizing *P. chrysostoma* in kidneys, in Minas Gerais, Brazil and superparasitism parasitoids in species of the genus *Trichopria*.

**References**


