Comunicación Breve

Discovery of Trichogramma colombiensis Velásquez de Ríos and Terán, 1995, in Uruguay

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Summary

The South American species Trichogramma colombiensis was collected for the first time in Uruguay, more precisely in the Maldonado region. This parasitoid emerged from Noctuidae eggs deposited on Olea europaea trees.

Key words: Egg parasitoid, biological control, biodiversity

Resumen

Descubrimiento de Trichogramma colombiensis Velásquez de Ríos y Terán, 1995, en Uruguay

La especie sudamericana Trichogramma colombiensis fue colectada por primera vez en Uruguay, más precisamente en la región de Maldonado. Este parasitoide emergió de huevos de Noctuidae depositados sobre un árbol de Olea europaea.

Palabras clave: parasitoide de huevos, control biológico, biodiversidad

Trichogramma colombiensis is a poorly known species living in South America. Its description appears only in Velásquez de Rios and Terán (1995), with drawings of the male genitalia and antenna. However, these drawings have a small size that does not allow a precise determination. The discovery of T. colombiensis in Uruguay is an opportunity to clarify this description.

Description of the species from the Uruguayan material

Male antenna. Flagellum length / flagellum width = 3.6 to 4.6 (mean= 3.98 ± 0.14, n=7); length of the longest flagelliform seta / flagellum width = 1.9 to 2.4 (mean= 2.13 ± 0.07, n=7) (Figures 1 and 2).

Male genitalia. Dorsal lamina (DLA) narrow at base and slightly notched; slight distance between the DLA tip and the parameres tips; DLA tip slightly exceeding volsella (VS) tips; intervolsellar process (IVP) thick and long, its tip reaching the VS tips (Figures 1 and 2).

Figure 1. Trichogramma colombiensis, A: male antenna, B: male genitalia. Bar scales = 0.1 mm for A and 0.05 mm for B.
Geographic distribution

The species is present in some South American countries: Argentina (Botto et al., 2002); Colombia (Buga: Velásquez de Rios y Terán, 1995); Venezuela (Barquisimeto, Lara state: Velásquez de Rios y Terán, 1995); Uruguay (Maldonado: present paper).

Hosts

Only three host species (eggs) were recorded: Spodoptera frugiperda (Smith) (Noctuidae) on Zea mays; Erinnyis ello (L.) (Sphingidae) on Manihot esculenta (Velásquez de Rios y Terán, 1995); undetermined Noctuidae on Olea europaea (present paper).

Discussion

The known distribution of T. colombiensis in the northern part and the southern part of South America is surprising. So, it is foreseeable that the species will be discovered during the future years in intermediate countries as Brazil, Paraguay and Bolivia. Many studies have to be performed on this egg parasitoid, notably to determine its biological characteristics and preferred hosts, before its possible utilization in biological control programs.

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References


Intra-genus classification

The species T. colombiensis belongs to the sub-genus Trichogramma. Inside this phylum, it is classified into the species group minutum (Pintureau, 2008) or the exiguum section (Pinto, 1998).

This description is in agreement with the one provided by Velásquez de Rios & Terán (1995), with some minor exceptions: flagellum slightly longer (flagellum length / flagellum width = 4.6), setae slightly shorter (length of the longest flagelliform seta / flagellum width = 1.6), DLA with no notch, IVP tip almost reaching the VS tips.

Figure 2. a) Sight of T. colombiensis male antenna and b) genitalia under the stereo-microscope.