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A NEW HOST RECORD FOR THE EGG PARASITOID *ANAGRUS NIGRIVENTRIS* (HYMENOPTERA: MYMARIDAE) OF THE CORN LEAFHOPPER, *DALBULUS MAIDIS* (HEMIPTERA: CICADELLIDAE)

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The corn leafhopper, *Dalbulus maidis* (DeLong & Wolcott), is the most common leafhopper feeding on corn in Argentina. It causes great losses to corn crop in most tropical and subtropical Americas because of its ability to transmit three important pathogens: Corn stunt spiroplasma (CSS), Maize bushy stunt phytoplasma (MBSP), and Maize rayado fino virus (MRFV) (Nault & Ammar 1989; Oliveira et al. 1998). The diseases caused by these pathogens adversely affect the corn crop in Argentina (Giménez Pecci et al. 1998, 2002a, b; Virla et al. 2004).

Until now, six species of parasitoids were known from eggs of *D. maidis*: *Anagrus breviphragma* Soyka, *A. flaveolus* Waterhouse, *Anagrus* sp. (Mymaridae), and *Paracentrobia subflava* (Girault), *Paracentrobia* sp., and *Oligosita* sp. (Trichogrammatidae) (Marín 1987; De Santis et al. 1992; Gladstone et al. 1994; Triapitsyn 1997; Oliveira & Spotti Lopez 2000; Virla 1999, 2001).

Representatives of Mymaridae, particularly *Anagrus* spp., have been utilized in several instances for the biological control of crop pests. Twelve described species of *Anagrus* Haliday occur in Argentina (Triapitsyn 1997, 1999, 2002; Triapitsyn & Virla 2004). Of these, *A. breviphragma* and *A. flaveolus*, are mentioned as affecting *D. maidis* populations (Triapitsyn 1997; Virla 2001, 2004).

The eggs of *D. maidis* are imbedded in the corn tissues, mostly along the midrib on the top side of the leaf (Pitre 1967). Sentinel eggs of *D. maidis* were exposed to parasitization in a cornfield from December 2004 to April 2005 at "El Manantial" site (Tucumán Province, Argentina: latitude 26°49'50.2"S, longitude 65°16'59.4"W, elevation 495 m). Potted plants containing sentinel eggs were placed inside the cornfield at no more than 3 m from the edge of the field.

In the laboratory, 6-10 females of *D. maidis* were placed in Polyethylene-Terephtalathe cylindrical cages (35 cm high × 18 cm diameter) on corn leaves in order to obtain sentinel eggs. The *D. maidis* colony was maintained at room temperature (25 ± 4°C), 70-80% RH, with natural summer photoperiod. Potted corn plants in the vegetative stage (three to six leaves) were checked daily for eggs. Eggs less than 24 h old were exposed for 72-96 h. After eight days, the leaves with exposed eggs were cut from the plant and transferred to Petri dishes containing wet tissue paper on the bottom and covered with a clear plastic food wrap to avoid desiccation and to keep parasitoids from escaping. Parasitized eggs were checked daily to ensure leaf quality until the emergence of adult wasps.

In total, 13828 (58.1%) of 23781 eggs were parasitized. One of the parasitoids was the mymarid wasp *Anagrus nigriventris* Girault (with 7.2% of the total egg parasitism). It is the first record of the corn leafhopper as a natural host for this species of *Anagrus*. Due to the importance of the diseases vectored by the corn leafhopper in the Americas, *A. nigriventris* should be properly evaluated as a potential biological control agent against this leafhopper pest.

Anagrus nigriventris, *A. breviphragma*, and *A. flaveolus* can be distinguished with the keys by Triapitsyn (1997, 1999, 2002). *Anagrus nigriventris* is one of the most common mymarid species in the New World, and has been recorded from Argentina, Brazil, Canada, Chile, Mexico, Peru, Trinidad, Tobago, and USA (throughout, including Hawaii) (Triapitsyn 1997, 1999, 2002). Its other hosts include the leafhoppers, *Aceratagallia* spp., *Circulifer tenellus* (Baker), *Empoasca fabae* (Harris), *E. solana* DeLong, *Empoasca* spp., *Erythroneura comes* (Say), *Scaphytopius nitridus* (DeLong) (Triapitsyn & Moratorio 1998), and the mirid bug, *Pycnoderes quadrimaculatus* Guérin-Méneville (Triapitsyn 1997).

Voucher specimens of *A. nigriventris* resulting from this study are deposited in the collections of the Entomology Research Museum, University of California at Riverside, USA (UCRC) and Fundación e Instituto Miguel Lillo at San Miguel de Tucumán, Argentina (IMLA).

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SUMMARY

A survey of the eggs parasitoids of the corn leafhopper, *Dalbulus maidis* (DeLong & Wolcott) was carried out in Tucumán Province, Argentina. Samples were collected during the summer of 2004-2005 with sentinel eggs. *Anagrus nigriventris* Gi-

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rault was responsible for 7.2% of the total egg parasitism. That is the first record of this parasitoid reared from the eggs of *D. maidis*; *A. nigriventris* is one of three species of *Anagrus* known to affect populations of this leafhopper pest in Argentina.

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