New Records and Accounts

First Report of *Trichogramma achaeae* (Hymenoptera: Trichogrammatidae) from Hawaii

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Abstract. *Trichogramma achaeae* is reported from Oahu and Kauai. This egg parasitoid was first found parasitizing eggs of *Helicoverpa zea* on corn plants on Oahu. It was subsequently reared from on Lycaenidae and Noctuidae collected from Fabaceae and Euphorbiaceae respectively, on Kauai.

Key words: *Trichogramma achaeae* (syn. *achaea*), Hawaii new state record

During surveys of natural enemies of *Helicoverpa zea* (Lepidoptera: Noctuidae) in parent seed corn (*Zea mays*) production fields on the north shore of Oahu (Waialua area), a significant proportion of eggs collected from corn silks were observed to be parasitized. Eggs displayed typical characteristics of eggs parasitized by *Trichogramma* species. The eggs assumed a shiny black appearance instead of undergoing normal larval development (Hoffman et al. 2002). Individual *H. zea* eggs were placed into size 0 gel caps and held in the laboratory until emergence of wasps. Emerging wasps were submitted (to Dr. John Pinto, UC Riverside) for identification by examination of morphological characters. The wasps were identified as *Trichogramma achaeae* (syn. *Trichogramma achaea*) Nagaraja and Nagarkatti 1970. Genomic DNA was extracted for sequencing of the ITS2 gene (Stouthamer et al. 1999) and the ITS2 sequence was deposited in GenBank (accession numbers: MW07-1 JN872294; HT09-1 JN872295, HT20-1 JN872296) to facilitate molecular characterization of future samples.

Parasitism of *H. zea* eggs by *T. achaeae* could exceed 60%, sometimes even in cornfields subjected to insecticide applications. *Trichogramma achaeae* were further reared from eggs of Lycaenidae collected from various Fabaceae on Kauai, and from eggs of *Achaea janata* (Noctuidae) collected from castor bean (*Ricinus communis*) on Kauai. The native range of *T. achaeae* is Asia (China, India, Russia); it has been purposefully introduced to various European countries and South- and Central American countries (Polaszek 2010). This appears to be the first record of this species from Lycaenidae hosts.

Literature cited

