

SCIENTIFIC NOTE

Do *Trichogramma minutum* Riley and *Trichogramma bennetti* Nagaraja & Nagarkatti (Hymenoptera: Trichogrammatidae) Occur in Brazil?RANYSE B. QUERINO¹ AND ROBERTO A. ZUCCHI²¹Embrapa Roraima, BR 174 km 8, Distrito Industrial, 69301-970, Boa Vista, RO, ranyse@cpafrr.embrapa.br²ESALQ/USP, Av. Pádua Dias, 11, 13418-900, Piracicaba, SP, razucchi@esalq.usp.br*Neotropical Entomology* 36(1):145-146 (2007)*Trichogramma minutum* Riley e *Trichogramma bennetti* Nagaraja & Nagarkatti (Hymenoptera: Trichogrammatidae) Ocorrem no Brasil?

RESUMO - *Trichogramma minutum* e *T. bennetti* têm sido registradas para o Brasil em alguns catálogos. Entretanto, as informações obtidas em estudos com *Trichogramma* nos últimos anos indicam que essas espécies não ocorrem no Brasil.

PALAVRAS-CHAVE: Parasitóides de ovos, distribuição geográfica, ocorrência, registro

ABSTRACT - According to some catalogues, *Trichogramma minutum* and *T. bennetti* have been recorded in Brazil. However, the information obtained in studies with *Trichogramma* in recent years indicate that those species do not occur in Brazil.

KEY WORDS: Egg parasitoid, geographical distribution, occurrence, record

Trichogramma minutum Riley has been originally described from specimens collected in the USA, whose types are missing. For this reason, a corresponding neotype was designated in the 1970's (Pinto *et al.* 1978). Actually, *T. minutum* represents a complex of populations whose taxonomic status still needs to be clarified. This species is commonly collected in Canada and the USA, both in natural habitats and in disturbed habitats (Pinto 1999).

T. minutum has been traditionally recorded in Brazil in Agricultural Entomology papers; until the 1960's, it was the only species in this genus recorded in Brazil, parasitizing eggs of *Alabama argillacea* (Hueb.) (Lepidoptera: Noctuidae), *Calpodes ethlius* (Stoll) (Lepidoptera: Hesperidae), *Diatraea saccharalis* (Fabr.) (Lepidoptera: Crambidae), *Erinnyis ello* (L.) (Lepidoptera: Sphingidae), *Helicoverpa zea* (Bod.) (Lepidoptera: Noctuidae), *Neoleucinodes elegantalis* (Guenée) (Lepidoptera: Crambidae) and *Sitotroga cerealella* (Oliv.) (Lepidoptera: Gelechiidae) (Silva *et al.* 1968). However, these records of *T. minutum* in Brazil are not the result of taxonomic identification, i.e., they were based on the use of an available name found in the literature, without appropriate species confirmation. During that period, the identification of *Trichogramma* species was superficial. The more consistent male genitalia characters for species identification were employed only in the beginning of the 1970's. Probably, based on Silva *et al.* (1968), this information was also included in the Luis De Santis' catalogue (1980), which must have been the source for the publication of a record in the "Universal Chalcidoidea Database" (Noyes 2004). In surveys

on *Trichogramma* species conducted in the past 20 years at several Brazilian locations, including the Luiz de Queiroz campus, in Piracicaba, SP, where, in the 1980's, specimens from Antibes (France) were reared, no *T. minutum* individual has been collected. A consideration can also be made that, in a broader sense, the *T. minutum* records in South America must be checked. For example, the record of this species in Venezuela was the result of an erroneous identification of specimens of *T. fuentesi* Torres (Velásquez & Teran 2003).

Trichogramma bennetti Nagaraja & Nagarkatti was originally described from *Hypsipyla ferrealis* (Hampson) (Lepidoptera: Pyralidae) eggs in Trinidad (unspecified location), and was recorded in Brazil by De Santis (1979). However, in later catalogues, this record was not confirmed (De Santis 1981, De Santis & Fidalgo 1994). The confusion about the record of this species in the country might be associated with another trichogrammatid – *Trichogrammatoidea bennetti* Nagaraja – which was described based on specimens collected in Brazil. Thus, the *T. bennetti* record from Brazil can be attributed to an erroneous information compilation. In addition to Trinidad, *T. bennetti* also occurs in Colombia (Pinto 1999) and Venezuela, where it had been erroneously described as *T. guariquensis* [sic] Velásquez & Terán, junior synonym (Velásquez & Terán 2003).

Therefore, the studies performed in the past 20 years by Zucchi (1986), Zucchi & Monteiro (1995, 1997), Zucchi *et al.* (1991), Querino & Zucchi (2002, 2003a,b,c,2004a,b,2005) support the conclusion that *T. minutum* and *T. bennetti* are not present in Brazil.

References

- Noyes, J.S. 2004. Universal Chalcidoidea database. The Natural History Museum. London. Available from: <http://flood.nhm.ac.uk/jdtml/perth/chalcidoidea/detail.dtml> (last accessed 3/iv/2004).
- Pinto, J.D. 1999. Systematics of the North American species of *Trichogramma* Westwood (Hymenoptera: Trichogrammatidae). Washington: Entomological Society of Washington, 287p. (Memoirs, 22).
- Pinto, J.D., G.R. Platner & E.R. Oatman. 1978. Clarification of the identity of several common species of North American *Trichogramma* (Hymenoptera: Trichogrammatidae). Ann. Entomol. Soc. Am. 71:169-180.
- Querino, R.B. & R.A. Zucchi. 2001. Espécies de *Trichogramma* – coleção da ESALQ. Available from: www.lef.esalq.usp.br/tricho (last accessed 9/i/2007).
- Querino, R.B. & R.A. Zucchi. 2002. Intraspecific variation in *Trichogramma bruni* Nagaraja, 1983 (Hymenoptera: Trichogrammatidae) associated with different hosts. J. Braz. Biol. (suplemento): 1-15.
- Querino, R.B. & R.A. Zucchi. 2003a. Caracterização morfológica de dez espécies de *Trichogramma* (Hymenoptera: Trichogrammatidae) registradas na América do Sul. Neotrop. Entomol. 32: 597-613.
- Querino, R.B. & R.A. Zucchi. 2003b. Six new species of *Trichogramma* Westwood (Hymenoptera: Trichogrammatidae) from a Brazilian forest reserve. Zootaxa 134: 1-11.
- Querino, R.B. & R.A. Zucchi. 2003c. New species of *Trichogramma* Westwood (Hymenoptera: Trichogrammatidae) associated with lepidopterous eggs in Brazil. Zootaxa 163:1-10.
- Querino, R.B. & R.A. Zucchi. 2004a. *Trichogramma* species (Hymenoptera: Trichogrammatidae) collected in suction trap in forest reserve. Neotrop. Entomol. 33: 451-455.
- Querino, R.B. & R.A. Zucchi. 2004b. Análise morfométrica em espécies de *Trichogramma* (Hymenoptera: Trichogrammatidae). Neotrop. Entomol. 33: 583-588.
- Querino, R.B. & R.A. Zucchi. 2005. An illustrated key to the species of *Trichogramma* (Hymenoptera: Trichogrammatidae) recorded in Brazil. Zootaxa 1073: 37-70.
- Santis, L. De. 1979. Catálogo de los himenopteros calcidoideos de América do Sur de los Estados Unidos. La Plata: Comisión de Investigaciones Científicas de la Provincia de Buenos Aires, 488p. (Publicación Especial).
- Santis, L. De. 1980. Catálogo de los himenopteros brasileños de la serie parasitica incluyendo Bethyloidea. Curitiba, UFPR, 395p.
- Santis, L. De. 1981. Catálogo de los himenopteros calcidoideos de América do sur de los Estados Unidos – Primer Suplemento. Rev. Per. Entomol. 24: 1-38.
- Santis, L. De & P. Fidalgo. 1994. Catalogo de Los Himenopteros Calcidoideos. Serie de La Academia Nacional de Agronomia y Veterinaria, n. 13. 154p.
- Silva, A.G. d'A., C.R. Gonçalves, D.M. Galvão, A.J.L. Gonçalves, J. Gomes, M.N. Silva & L. Simoni. 1968. Quarto catálogo dos insetos que vivem nas plantas do Brasil. Seus parasitos e predadores. Lab. Central Patologia Vegetal, MA ed., 1º. Tomo, Parte II.
- Velásquez, M. & J. Terán. 2003. Los *Trichogramma* (Hymenoptera: Trichogrammatidae) de la región noroccidental del estado Guárico, Venezuela. Entomotropica 18: 127-145.
- Zucchi, R.A. 1988. New species of *Trichogramma* (Hymenoptera: Trichogrammatidae) associated with sugar cane borer *Diatraea saccharalis* (F.) (Lepidoptera: Pyralidae) in Brazil. Colloq. INRA 43: 133-140.
- Zucchi, R.A., J.R.P. Parra & S. Silveira Neto. 1991. *Trichogramma* species associated with some Lepidopterous pest in Brazil. Colloq. INRA 56: 131-134.
- Zucchi, R.A. & R.C. Monteiro. 1995. New records of hosts and distribution of *Trichogramma* species in Brasil. Colloq. INRA 73: 51-53.
- Zucchi, R.A. & R.C. Monteiro. 1997. O gênero *Trichogramma* na América do Sul, p41-66. In J.R.P. Parra & R.A. Zucchi (eds.), *Trichogramma* e o controle biológico aplicado. Piracicaba, FEALQ, 324p.

Received 01/VIII/05. Accepted 24/IV/06.