

SCIENTIFIC NOTE

***PTEROPTRIX BICOLOR* (HOWARD, 1898) (HYMENOPTERA:
APHELINIDAE) - A NEW PARASITOID OF PISTACHIO PEST
SALICICOLA DAVATCHI (BALACHOWSKY & KAUSSARI, 1951)
(HEMIPTERA: DIASPIDIDAE)**

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Pteroptrix bicolor (Howard, 1898) (Hymenoptera: Aphelinidae) was determined as parasitoid of pistachio pest, *Salicicola davatchi* (Balachowsky & Kaussari, 1951) (Hemiptera: Diaspididae). Parasitization rate is also discussed. Observations on parasitization rate are presented. The parasitism of *S. davatchi* by *P. bicolor* was determined as the first record in world.

Aphelinidae family has more than 1230 species under 34 genera. The members of the family are widespread across the world. They are either endo or ecto-parasites of Aphidoidea, Aleyrodoidea, Psylloidea and primarily Coccoidea superfamilies (Noyes, 2009). *Pteroptrix* species are parasitoids of many pests belonging to Diaspididae family in Turkey (Japoshvili & Karaca, 2002). This study was focused to reveal parasitism of *S. davatchi*, an important pest of pistachio.

This study has been carried out in two pistachio orchards infested by *S. davatchi* during 2009 in Şanlıurfa Province. Five to ten infested pistachio shoots with 15 to 20 cm length, depending on the size of the orchards, were cut and collected during 18.05.2009 and 04.06.2009. The shoots were placed in paper bags with glass tubes on their top to observe emergence of parasitoids moving towards to light into the tubes. Depending on the size of the orchards, 5 to 10 infested pistachio shoots, 15 to 20 cm in length were cut and taken to the laboratory. The tubes were daily checked and emerged individuals were collected and placed in vials containing 70% alcohol. The emergence of parasitoids was weekly recorded. Material was slide mounted according Noyes (2009) and identified according to key of Yasnosh (1978) by second author. Voucher specimens are deposited to the entomological collection of I. Chavchavadze State University, Tbilisi, Georgia.

The parasitization rate of *P. bicolor* on *S. davatchi* were calculated by counting parasitized scales according exit holes on them (Fig. 1) in Tülmen and Kirbaşı locations of Şanlıurfa province.

Pteroptrix bicolor (Howard, 1898) was a first recorded as a parasitoid of *S. davatchi*. Parasitization ratios of *S. davatchi* by *P. bicolor* varied within 15 and 12 % Although, there were no significant differences in term of parasitization ratios within locations the ratios were higher in Kirbasi location compared to Tulmen (Figure 2). Percentage parasitization was calculated by the following equation.

$$\text{Parasitization Percentage (\%)} = \frac{\text{The number of parasitization individual} \times 100}{\text{The number of total individual (100 individual)}} \%$$

P. bicolor parasitizes *Salicicola kermanensis* (Lindinger) which is pest of pistachio in Isparta province (Japoshvili & Karaca, 2002). However, the parasitism of *S. davatchi* by *P. bicolor*, observed in this study in the world.

Further investigations are needed for the opportunities to utilize *P. bicolor* in the biological control of *S. davatchi* in the future.

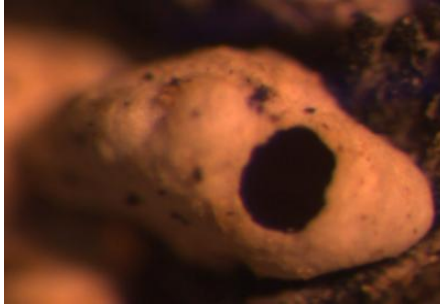


Figure 1. Emerging hole of *Pteroptrix bicolor* on *Salicicola davatchi*.

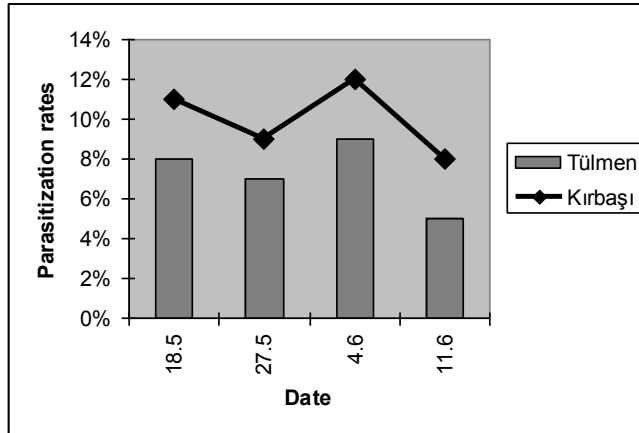


Figure 2. Parasitization rates of *Pteroptrix bicolor* on *Salicicola davatchi*.

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