Egg parasitoids (Hymenoptera: Mymaridae and Trichogrammatidae) of the gall-making leafhopper Scenergates viridis (Hemiptera: Cicadellidae) from Uzbekistan, with taxonomic notes on the Palaeartic species of Aphelinoidea

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Abstract

A new species of the Aphelinoidea Girault (Hymenoptera: Trichogrammatidae), A. (Aphelinoidea) sariq Triapitsyn & Rakitov sp. n., is described from Uzbekistan. Both sexes were reared from eggs of the only known truly gall-making leafhopper, Scenergates viridis (Vilbaste), laid inside its galls on camelthorn, Alhagi maurorum Medikus; additional females were found dead inside the galls. Aphelinoidea sariq is the only known species of the nominate subgenus of Aphelinoidea whose body color is predominantly yellow. Taxonomic notes on other Palaeartic species of Aphelinoidea are provided; A. scythica Fursov, syn. n. is synonymized under A. (Aphelinoidea) turanica S. Trjapitzin. Another trichogrammatid, Paracentrobia (Paracentrobia) sp., was reared from eggs of S. viridis in much smaller numbers. Also described from the same locality and host is Gonatocerus (Lymaenon) mitjaevi Triapitsyn & Rakitov sp. n. (Hymenoptera: Mymaridae).

Key words: taxonomy, life history, Chalcidoidea, camelthorn, Alhagi maurorum

Introduction

Aphelinoidea Girault is a large, diverse genus of Trichogrammatidae (Hymenoptera), some members of which are egg parasitoids of leafhoppers (Hemiptera: Cicadellidae) and thus may be important for biological control (Trjapitzin 1995; Walker et al. 1997; Walker et al. 2005). Trjapitzin (1995) reviewed the Holarctic species of the genus, but type specimens of the Palaeartic species were not available at that time. Since then five additional species have been described from the Palaeartic region—two from Xinjiang Uyghur Autonomous Region of China (Hu & Lin 2005; Wang et al. 2009) and three from Ukraine (Fursov 2007). Aphelinoidea cultrocaudata Wang, He, Zhang & Hu was subsequently synonymized under A. (Lathromeroides) bischoffi (Novicky) by Viggiani (2011). Fursov (2007) keyed the Palaeartic Aphelinoidea species but omitted A. (Aphelinoidea) turanica S. Trjapitzin. The latter species was described from an insectary culture of Turkmenistan origin (Trjapitzin 1995). Aphelinoidea turanica was introduced from Iran and Turkmenistan into California, USA, against the beet leafhopper, Nealiturus (Circulifer) tenellus (Baker), and became established there (Trjapitzin 1995; Walker et al. 1997; Walker et al. 2005).

Here we describe a distinctive new Palaeartic species of A. (Aphelinoidea Girault) based on dead female specimens collected in Uzbekistan in galls of the only known truly gall-making leafhopper, the camelthorn gall leafhopper Scenergates viridis (Vilbaste) (Figs. 1, 2), and also on specimens of both sexes reared from its eggs, laid inside the galls (Fig. 3). Immatures of the host leafhopper, also known from eastern Turkmenistan and southern Kazakhstan, induce leaves of the camelthorn, Alhagi maurorum Medikus, to fold along midribs and grow into closed pod-like succulent chambers, up to 20 mm in length, containing individual developing leafhoppers (Mitjaev 1968; Dubovsky & Sulaimanov 1983; Rakitov & Appel 2012). In September 2010, Esther Appel and the first author collected >300 galls of S. viridis from A. maurorum shrubs on the territory of the ecocenter “Dzheyran”, 40...