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Egg parasitoids (Hymenoptera: Mymaridae and Trichogrammatidae) of the gall-making leafhopper *Scenergates viridis* (Hemiptera: Cicadellidae) from Uzbekistan, with taxonomic notes on the Palaearctic 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 Palaearctic 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 Palaearctic species were not available at that time. Since then five additional species have been described from the Palaearctic 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 Palaearctic *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, *Neoliturus (Circulifer) tenellus* (Baker), and became established there (Trjapitzin 1995; Walker *et al.* 1997; Walker *et al.* 2005).

Here we describe a distinctive new Palaearctic 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