

Short communication

***Cardiochiles fallax* (Hym.: Braconidae), a new species record for Iran**

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چکیده

در این تحقیق که در سال ۱۳۸۸ به منظور شناسایی زنبورهای پارازیتوئید شب‌پره‌ی دانه‌خوار سویا، *Etiella zinckenella* (Treitschke) (Lep.: Pyralidae) در روستای حسن‌آباد استان فارس صورت گرفت، دو گونه زنبور از خانواده‌ی Braconidae شامل *Cardiochiles fallax* Kokujev و *Ascogaster quadridentata* Wesmael جمع‌آوری و شناسایی شد که گونه‌ی اول برای اولین بار از ایران گزارش می‌شود. شب‌پره‌ی دانه‌خوار سویا نیز میزبان جدید برای هر دو گونه می‌باشد.

The soybean pod borer, *Etiella zinckenella* (Treitschke) (Lep.: Pyralidae) is a key pest of pods and seeds of soybean (Marwoto & Saleh, 2003). This species is polyphagous attacking many cultivated crops such as medics, clovers, lucerne, field peas (especially blue boilers), vetch, lentils and soybeans (Hopkins, 2003). It is widely distributed in Asia, Europe, Africa, North America, Central and South America and Australia (Naito, 1960). This species causes up to 40% crop losses in the Lorestan province, Iran, and adjacent regions (Parvin, 1981).

*Chelonus oculator* Panzer (Hym.: Braconidae) has been reported as an egg-larval parasitoid of *E. zinckenella* from Caucasus and Kazakhstan (Ozkan, 2006). Huddleston & Walker (1988) reported two parasitoid species of *E. zinckenella* as *Cardiochiles brachialis* Rondani and *C. saltator* (Fabricius) (Hym.: Braconidae) from Sahel in West Africa. This pest is also parasitized by *Bracon* sp., *Tetrastichus* sp. and some species of Pteromalidae (Sandhu & Verma, 1969).

The current study was conducted in 2009 to identify the parasitoids of the soybean pod borer in Fars province. The pods of chickling pea (*Lathyrus sativus* (L.)) infested by *E. zinckenella* were collected from fields in Hasanabad village in August 2009. Samples were kept in a growth chamber (25 ± 0.1°C, 60 ± 5% relative humidity and a photoperiod of 16: 8 (Light: Dark) h) until the adult parasitoids emerged. Two braconid species, *Cardiochiles fallax* Kokujev

and *Ascogaster quadridentata* Wesmael, were collected and identified by the last author, of which the former species is newly recorded from Iran. The specimens were deposited in the collection of the Department of Entomology, Tarbiat Modares University, Tehran, Iran. Geographical distribution and host range of parasitoids are briefly presented as follows:

**- *Cardiochiles fallax* Kokujev**

**Material examined** – Fars: Hasanabad, 1.viii.2009, 2 ♀♀, 1 ♂, ex: *E. zinckenella* on *L. sativus*, leg. R. Taghizadeh.

**Distribution** – Eastern Palaearctic, Europe, Western Palaearctic (Armenia, Azerbaijan, Georgia, Romania, Kazakhstan, Russia, Greece (Lozan, 2004), Tajikistan, Turkey, Ukraine (Belokobylskij, 1993)).

**Hosts** – *Myrllaea marmorata* (Alpheraky) (Lep.: Pyralidae) (Anonymous, 2009).

Adults of *C. fallax* are larger than most other braconid parasitic wasps, approximately 7 mm long, and have black wings and a red abdomen (Layton & Stewart, 2009).

**- *Ascogaster quadridentata* Wesmael**

**Material examined** – Fars: Hasanabad, 1.viii.2009, 2 ♀♀, 2 ♂♂, ex: *E. zinckenella* on *L. sativus*, leg. R. Taghizadeh.

**Distribution** – Eastern Palaearctic, Europe, Nearctic, Neotropical, Oceanic, Oriental, Western Palaearctic (Achterberg & Franquinho Aguiar, 2009).

**Hosts** – *Gymnandrosoma aurantianum* Lima (Lep: Tortricidae) (Blanco-Metzler *et al.*, 2009), *Cydia pomonella* (L.) (Lep.: Tortricidae) (Ranjbar Aghdam & Fathipour, 2010).

This species is an egg-larval endoparasitoid of a wide range of Lepidoptera. It was introduced into USA, Canada, Argentina and Australia for the

biological control of *Cydia nigricana* (Fabricius), *C. pomonella*, *C. strobilella* (L.), *Diatraea saccharalis* (Fabricius) and *Grapholita molesta* (Busck) (Delury, 1994).

These findings are the first data on the parasitoids of *E. zinckenella* in Iran and may lead to a better understanding of natural enemies of this pest.

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