RICANIA GERMAR, 1818 SPECIES OF WESTERN PALAEARCTIC REGION (HEMIPTERA: FULGOROMORPHA: RICANIIDAE)

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ABSTRACT: In this study, *Ricania* species in western Palaearctic region are examined. Four species belonging to this genus are determined. These are; *Ricania aylae* Dlabola, 1983; *R. hedenborgi* Stal, 1865; *R. japonica* Melichar, 1898 and *R. soraya* Dlabola, 1983. *R. japonica* Melichar, 1898 is the first record for Turkish fauna.

KEY WORDS: *Ricania*, Fulgoromorpha, Hemiptera, Western Palaearctic region.

The family Ricaniidae is mostly distributed in Tropical regions. The family is represented only by the genus *Ricania* in the Palaearctic region. Melichar (1898) gave 48 species of the genus in his Ricanidae monograph. Nast (1972) reported 6 species in the check list in the Palaearctic region. At present, in Fulgoromorpha Lists on the Web, 93 species have been listed for the whole world except *R. aylae* Dlabola, 1983 and *R. soraya* Dlabola, 1983. Four species are known from the western Palaearctic region in the genus. These are *R. aylae* Dlabola, 1983; *Ricania hedenborgi* Stål, 1865; *R. japonica* Melichar, 1898 and *R. soraya* Dlabola, 1983. *Ricania hedenborgi* Stål, 1865 is the most widely distributed species in the region. In the western Palaearctic region, *R. japonica* Melichar, 1898 from Ukraine, *R. aylae* Dlabola, 1983 from Turkey and *R. soraya* Dlabola, 1983 from Iran are known. Also, *R. aylae* Dlabola, 1983 is endemic to Turkey and *R. soraya* Dlabola, 1983 is endemic to Iran.

The genus *Ricania* is one of the genera that include the most considerable species for Turkish fauna.

In this study, for the purpose of determining the status of *Ricania* species in Turkey, my own sent specimens of *R. japonica* and *Ricania* specimens in the Museum of Agricultural Struggle Institute are examined. *Ricania* specimens in the Museum are determined as two species, *R. aylae* and *R. hedenborgi.* In the museum, *R. aylae* and *R. hedenborgi* was identified by Dr. J. Dlabola. I checked them. So I confirmed their identification. Anyway, the specimens of *R. aylae* are paratypes.

On the other hand, some *Ricania* specimens were sent from Rize province (Eastern Black Sea Region) for identification to Ankara Agricultural Struggle Central Research Institute. The specimens were given by a member of staff (Dr. Işıl Özdemir) of the Institute to the author for identification. Some of the specimens are deposited in the museum of

the Institute and some of them are in the personal collection of the author. The specimens were identified by the author as *R. japonica*. It is the first record to Turkey. This record is very important. Since the record of Turkey of this Far East distributed species (which occurs in Japan, China, Korea and Oriental region) also confirm the record for Ukraine and doubtful Georgian record.

Consequently, the western Palaearctic *Ricania* fauna now consists of four species.

Family: Ricaniidae Amyot et Serville, 1843
Genus: *Ricania* Germar, 1818

Type-species: *Cicada hyalina* Fabricius, 1775

***Ricania aylae* Dlabola, 1983**

Dlabola, J. 1983. Ergebnisse der Tschechoslovakisch-Iranischen entomologischen Expeditionen 1970 und 1973 nach dem Iran. Acta entomologica Musei Nationalis Pragae 41: 91-97.

Distribution: Turkey (Dlabola, 1983). **Distribution in Turkey:** Elazığ prov., İzmir prov.: Selçuk, Muğla prov.: Marmaris, Muş prov. (Dlabola, 1983).

***Ricania hedenborgi* Stål, 1865**

Stål, C. 1865. Homoptera nova vel minus cognita, Ofversigt af Kongliga Svenska Vetenskaps-Akademiens Förhandlingar. Stockholm 22: 145-165.

Distribution: Armenia, Afro-tropical region, Crete, Dodecanese Is., Greece, North Aegean Is., Near East, North Africa, Turkey (Nast, 1972, 1987; www.faunaeur.org). **Distribution in Turkey:** Diyarbakır prov.: Ergani, Mardin prov.: Nusaybin (Lodos & Kalkandelen, 1981).

***Ricania japonica* Melichar, 1898**

Melichar, L. 1898. Vorlaufige Beschreibungen neuer Ricanideen, Verhandlungen der Kaiserlich-Königlichen Zoologisch-botanischen Gesellschaft in Wien. Wien 48: 384-400.

Distribution: Japan (Honshu, Kyushu, Shikoku), N China, Georgia?, Korea, Oriental region, Ukraine (Nast, 1972, 1987; www.faunaeur.org). **Distribution in Turkey:** This species is the first record to Turkey. **Materials:** Rize: Center, 26.08.2007, 45♂♂, 44♀♀ (Resul Yıldırım leg.) on *Vitis vinifera*, *Rubus* sp., *Camelia sinensis*, *Ficus carica*, *Phaseolus vulgaris*, *Cucumis sativus*, *Lycopersicum esculentum* and weeds. On the other side, this species was observed by agricultural engineers on the cultural plants in Rize province and numerous specimens were collected (Plate 1).

***Ricania soraya* Dlabola, 1983**

Dlabola, J. 1983. Ergebnisse der Tschechoslovakisch-Iranischen entomologischen Expeditionen 1970 und 1973 nach dem Iran. Acta entomologica Musei Nationalis Pragae 41: 91-97.

Distribution: Iran (Dlabola, 1983).

DISCUSSION

As a result of examining all the specimens, diagnostic characters between *R. aylae* and *R. hedenborgi* given in the key by Dlabola (1983) could not be determined. Dlabola's key (1983) is given as follows. In the examined specimens, diagnostic characters between two species have not been observed in terms of mentioned characters, namely size, colour and apical spots on the wings in the key (Plate 2). Besides, genital structures of paratypes of *R. aylae* and male specimens of *R. hedenborgi* are examined.

As a result of the examination, it is seen that apophysis in apex of aedeagus is longer than that of *R. hedenborgi*. Any difference could not be seen between two species except this. Also, *R. japonica* specimens and wing patterns and genital structures of *R. soraya* described from İran by Dlabola are compared with them. Wings patterns are important to separate *Ricania* species such as given in monograph of Melichar.

I compared genital structures of *R. soraya, R. japonica, R. aylae* and *R. hedenborgi.* The species *R. soraya* and *R. japonica* are easily distinguished from other species by both wing patterns and genital structures are easily distinguished from the above two species. However, *R. aylae* and *R. hedenborgi* can not be separated to each other. Their genital structures are rather similar, but only, the length of apophysis in apex of aedeagus is different. It is possible that the difference is in populational variations. So, *R. aylae* may be a synonym of *R. hedenborgi*. More specimens should be examined for a certain decision of this approach.

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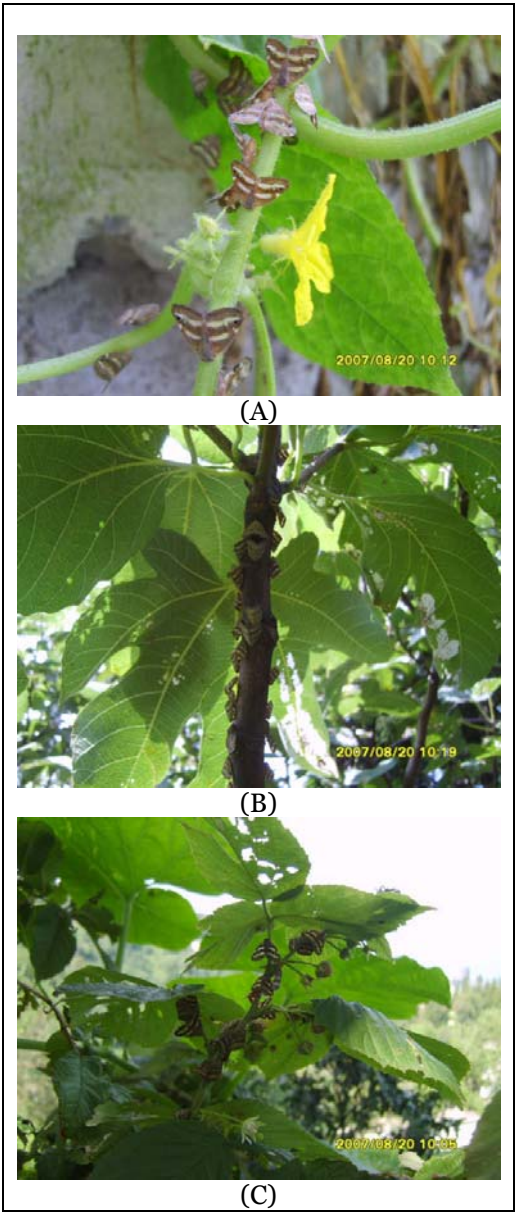

Plate 1: *Ricania japonica* specimens. A: on *Cucumis sativa*, B: on *Ficus carica* C: on *Rubus* sp.

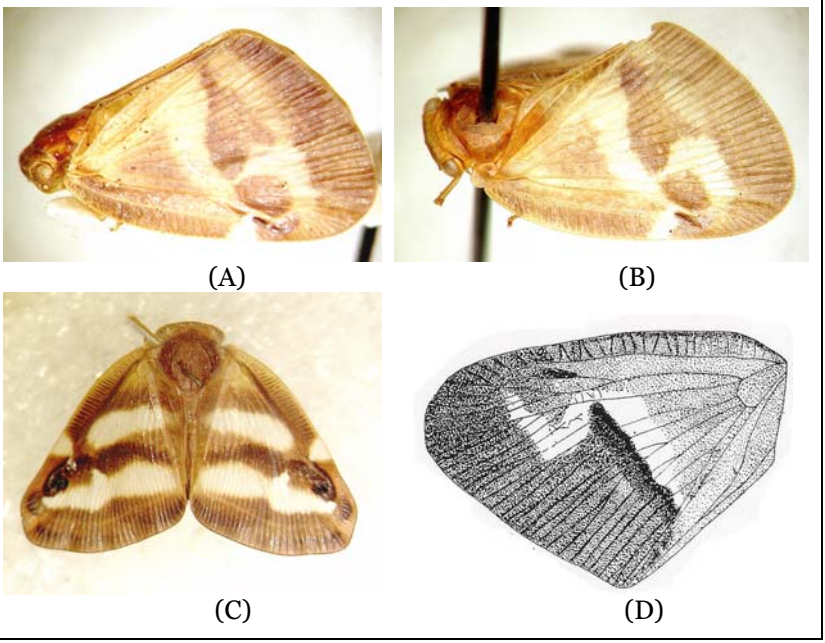

Plate 2: A: *Ricania aylae* (Paratypus male: İzmir prov: Selçuk), B: *R. hedenborgi* (Male: Mardin prov: Nusaybin), C: *R.japonica* (Male: Rize prov.), D: *R. soraya* from Dlabola (1983).