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First records of *Latilica maculipes* (Hemiptera: Issidae) and *Synophropsis lauri* (Hemiptera: Cicadellidae) in Hungary

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Abstract. Two Mediterranean Auchenorrhyncha species, the planthopper *Latilica maculipes* (Melichar, 1906) and the leafhopper *Synophropsis lauri* (Horváth, 1897) are reported for the first time from Hungary. With 2 figures.

Keywords. Auchenorrhyncha, alien species, faunistics, *Acer*, ornamental shrubs.

INTRODUCTION

The number of leafhopper and planthopper species reported from Hungary is continuously increasing, several species have just recently been recorded for the first time. Most of them are native of North America or Asia [*e.g. Scaphoideus titanus* Ball, 1932 and *Orientus ishidae* (Matsumura, 1902)] (Dér *et al*. 2007, Koczor *et al.* 2013), or are of Mediterranean origin [*e.g. Frutioidia bisignata* (Mulsant & Rey, 1855) and *Pagiphora annulata* (Brullé, 1832)] (Orosz & Horváth 2009, Koczor *et al.* 2011). As a result of faunal surveys in Budapest, another two Mediterranean Auchenorrhyncha species are reported here for the first time from Hungary.

MATERIAL AND METHODS

The arthropod community of ornamental shrubs (*Abelia, Lonicera* and *Viburnum* spp.) was assessed in the Botanical Garden of the Szent István University (Botanical Garden Buda) in 2011 and 2012. In a subsequent study, the leafhopper and planthopper assemblages of field maple (*Acer campestre* L.) trees were also surveyed in different public areas of Budapest in 2016 and 2017.

Arthropods were collected by beating the branches of the sampled shrubs and trees over a beating umbrella. The collected individuals were preserved as dry specimens and deposited in the Hemiptera Collection of the Hungarian Natural History Museum, Budapest. All specimens were identified by A. Orosz using characters of the exoskeleton and male genitalia. Photographs of habitus were taken using a Nikon D5000 digital camera.

RESULTS AND DISCUSSION

Latilica maculipes (Melichar, 1906)

Material examined. Botanical Garden Buda (47°28'48.4"N 19°02'21.5"E), *Lonicera x xylosteoides*, 17.VIII.2012, 1♀, leg. A. Haltrich & A. Karap; Gellért-hegy (47°29'09.3"N, 19°02'51.1" E), *Acer campestre*, 27.IX.2017, 1♀, leg. D. Korányi; Ludovika tér (47°28'55.1"N, 19°05'01.6"E), *A. campestre*, 16.VII.2017, 1♂, leg. D. Korányi;

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Mátyás tér (47°29'31.6"N, 19°04'45.3"E), *A. campestre*, 13.X.2016, 1♀, leg. D. Korányi; Róbert Károly körút (47°32'08.5"N, 19°03'47.4" E), *A. campestre*, 27.IX.2017, 1♀, leg. D. Korányi.

Distribution. Described from Croatia, Bosnia-Hercegovina and Italy (Melichar 1906). It was also reported from Israel, Palestine, Jordan (Linnauori 1962), Cyprus, Greece, Turkey (Nast 1972), Southern France, Spain (Baleares Islands) (Dlabola 1975), Southern Russia (Logvinenko 1975, Gnezdilov 1999, Gnezdilov *et al*. 2014) and Slovenia (Seljak 2004).

Host. Very common on Mediterranean vegetation, mostly evergreen trees and shrubs, *e.g.* evergreen oak (*Quercus ilex* L.), cork oak (*Q. suber* L.), mastic tree (*Pistacia lentiscus* L.), common myrtle (*Myrtus communis* L.) and olive (*Olea europea* L.) (Linnavuori 1962, Mazzoni 2005).

Flight period. Based on our data, in Hungary, adults are active from middle of July to middle of October.

Habitus. Detailed description of the habitus of *L. maculipes* was provided by Melichar (1906) and furthermore, Gnezdilov & Mazzoni (2004) published the description of the genitalia of both sexes. Length of body 4.8–5.2 mm. The general appearance of the adult is shown in Figs. 1a–b.

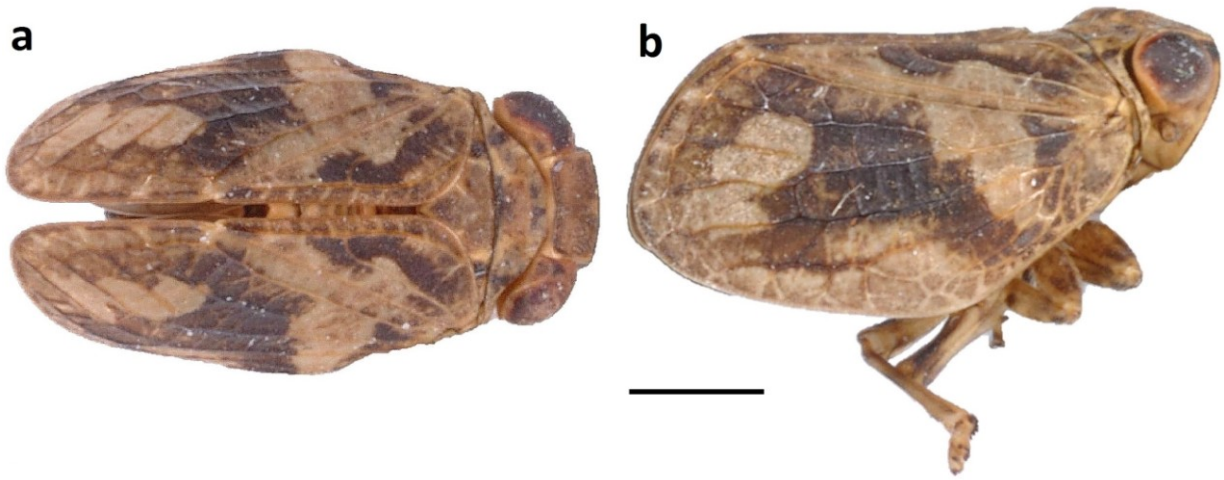

Figure 1. *Latilica maculipes* (Melichar, 1906) female. a = dorsal view; b = lateral view. Scale bar = 1 mm. (Photo: Dávid Korányi.)

Synophropsis lauri (Horváth, 1897)

Material examined. Botanical Garden Buda (47°28'48.4"N 19°02'21.5"E), *Abelia x grandiflora*, 29.VIII.2011, 1♀, *Viburnum tinus*, 07.IX. 2011, 1♂, 16.IX.2011, 1♂, 26.IX.2012, 1♀, *Viburnum x burkwoodii*, 29.VIII.2011, 1♂, 07.IX. 2011, 2♂♂, *Viburnum nitens*, 10.VIII.2011, 1♀, 1♂, 29.VIII. 2011, 1♂, 07.IX.2011, 2♂♂, 10.X. 2011, 1♂, *Viburnum carlesii*, 07.IX.2011, 2♀♀, *Viburnum x pragense*, 07.IX.2011, 2♂♂, *Viburnum setigerum*, 16.IX.2011, 1♀, leg. A. Haltrich & A. Karap; Farkasvölgy (47°29'05.0"N, 18°59' 09.4"E), *A. campestre*, 13.IX.2016, 1♀, leg. D. Korányi; Vérmező (47°30'05.0"N, 19°01' 31.7"E), *A. campestre*, 27.IX.2017, 1♀, leg. D. Korányi.

Distribution. Synophropsis lauri was described from Croatia (Horváth 1897). It was also recorded from Greece, Israel, Italy, Jordan, Turkey, Azerbaijan, Ukraine (Nast 1972), France (Bonfils & Lauriaut 1975), Southern Russia (Gnezdilov

1999), Slovenia (Holzinger & Seljak 2001), Switzerland (Mühlethaler 2001), Germany (Nickel 2010), Belgium (Baugnée 2011), Malta (D'Urso & Mifsud 2012), Austria (Holzinger *et al*. 2016) and England (Bantock & Botting 2018).

Host. This species was described from specimens collected on bay laurel (*Laurus nobilis* L.) (Horváth 1897). In the Mediterranean region, *S. lauri* feeds on various evergreen trees and shrubs, in Central Europe, besides *L. nobilis*, common ivy (*Hedera helix* L.) seems to be the most suitable host plant (Nickel 2010). Based on our records, *Viburnum* species may also be suitable as host plants for this leafhopper species.

Flight period. In the studied areas, adults are active from middle of August to middle of October.

Habitus. Description of the habitus was given by Horváth (1897) and Baugnée (2011). 6.0–6.5 mm. The general appearance of the adult is shown in Figs. 2a–b.

Comments. Up to now, *S. lauri* has been erroneously listed for Hungary (Jach 2018). This species was originally described from Buccari (Bakar) and Fiume (Rijeka) by Horváth (1897). Now these settlements belong to Croatia.

The individuals of *Latilica maculipes* and *Synophropsis lauri* were collected from green belt areas in urban environments. Both species might have been introduced to Hungary unintentionally, but considering the climatic variations of the last years, the possibility of a natural expansion of their distribution area could not be excluded. Further surveys are needed to explain their occurrence and frequency in natural habitats.

The last checklist of leafhoppers and planthoppers of Hungary published by Györffy *et al*. (2009) listed 540 species. Since then several species have been added to the list: *P. annulata* (Koczor *et al*. 2011), *Graphocephala fennahi* Young, 1977 (Papp *et al*. 2012), *Liguropia juniperi* (Lethierry, 1876), *Opsius smaragdinus* Emeljanov, 1964 (Koczor *et al*. 2012), *O. ishidae* (Koczor *et al*. 2013) and *Tautoneura polymitusa* Oh & Jung, 2016 (Tóth *et al*. 2017). With the newly recorded *L. maculipes* and *S. lauri* currently 548 Auchenorrhyncha species are reported from Hungary. According to A. Orosz, as a result of different faunal collections (*e.g.* Hungarian Biodiversity Days and the field program of 5th European Hemiptera Congress) there are some additional unpublished records of Auchenorrhyncha new to Hungary, and therefore, the presumed number of Auchenorrhyncha species in Hungary exceeds 560.

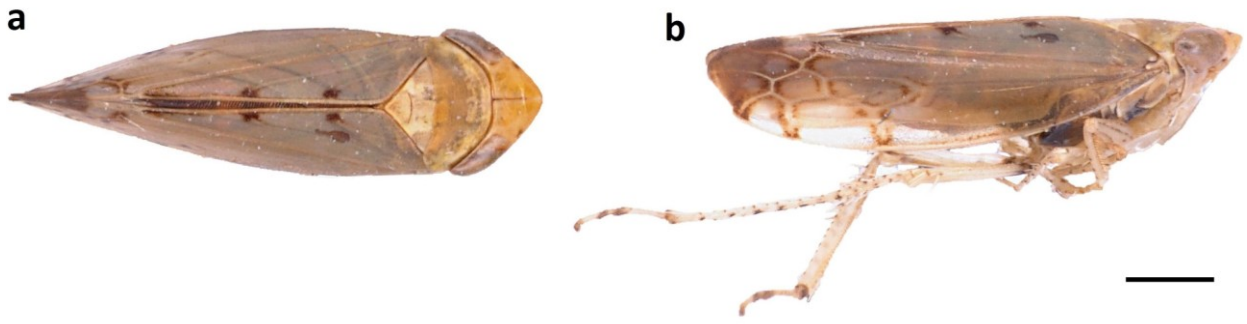

Figure 2. *Synophropsis lauri* (Horváth, 1897) female. a = dorsal view; b = lateral view. Scale bar = 1 mm. (Photo: Dávid Korányi.)

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