GARGARA GENISTAE AND *STICTOCEPHALA BISONIA* (HEMIPTERA: CICADOMORPHA, MEMBRACIDAE) NEW FOR LITHUANIAN FAUNA

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Introduction

The knowledge on planthoppers and leafhoppers (Auchenorrhyncha: Fulgoromorpha et Cicadomorpha) of Lithuania is not very sufficient. It is not surprising, having in mind a rather weak effort of research of this group. After an intense collecting of Juhan Vilbaste in the 1960's, the list comprised 300 species (Vilbaste, 1974). Later only sporadic additions to the list were provided: Söderman & Dapkus (2009) added 13 new species, Söderman & Rintala (2009) added 18 and so Söderman *et al*. (2009) listed a total of 331 species known from Lithuania. With an addition of *Ledra aurita* (Linnaeus, 1758) in 2014 by Ivanauskas *et al*. (2014), the list consisted of 332 species.

A single species of Membracidae, *Centrotus cornutus* (Linnaeus, 1758), was previously known from Lithuania (Vilbaste, 1974) and this paper adds two more, so that the current list of planthoppers and leafhoppers of Lithuania reaches 334 species.

Material and Methods

Insects were collected using entomological net or directly observed on food plants. Images were made by stacking photographs, produced by Cannon EOS 80D camera equipped with Canon MP-E 65mm lens, mounted on a focus stacking system from MJKZZ Europe (www.mjkzz.de). Species identification was made using Holzinger *et al*. (2003). Specimens are deposited at the Museum of Zoology of Vilnius University.

List of localities

Locality	Administrative district	Coordinates (LAT, LONG)
Dubininkas	Varėna district	54.09676, 24.28503
Mardasavas	Varėna district	54.15087, 24.31826
Puvočiai (1)	Varėna district	54.11289, 24.29891
Puvočiai (2)	Varėna district	54.11929, 24.29729

List of species

***Gargara genistae* (Fabricius, 1775)** (Fig. 1)

Dubininkas, 16 08 2021, >10 spec. observed on *Cytisus scoparius* (L.) Link; Mardasavas, 10 08 2021, >10 spec. observed on *C. scoparius*; Puvočiai (1), 16 08 2007, 1 spec., 11 08 2021, >10 spec. observed on *C. scoparius*.

***Stictocephala bisonia* Kopp & Yonke, 1977** (Fig. 2)

Puvočiai (2), 12 08 2021, 1 spec.

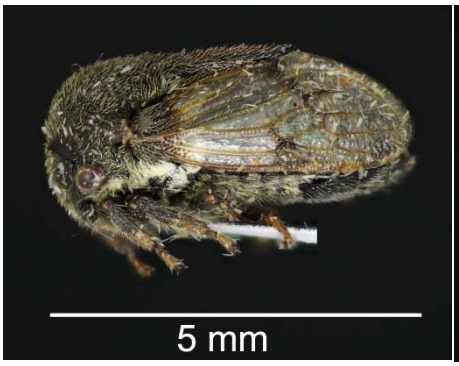

Fig. 1. *Gargara genistae*

Fig. 2. *Stictocephala bisonia*

Discussion

The first specimen of *G. genistae* was collected accidently, by sweeping the bushes of *Cytisus scoparius* in Puvočiai, Southern Lithuania, and a possible connection with this plant was noted then, but left unchecked for some years. Later, when *Cytisus scoparius* were checked at several places in Puvočiai and Dubininkas, rather numerous *G. genistae* were observed, suggesting the possible wider distribution of this membracid.

C. scoparius was introduced to Lithuania at the end of the 19th century, and later spread throughout the country. Currently it is included into the List of Invasive Species of Lithuania and is a widespread shrub in western, southern and eastern Lithuania, but rare or absent in the northern part of the country (Taura & Gudžinskas, 2020). *Gargara genistae* might have been introduced to Lithuania together with *Cytisus*, but *G. genistae* are also known to aggregate on other woody species of Fabaceae (*Colutea*, *Coronilla*, *Genista* and others) (Holzinger *et al*., 2003) and it might have just moved from one plant to another.

Stictocephala bisonia, on the other hand, is a very new addition to Lithuanian fauna. It is a Nearctic species, found in Europe since around 1912, when it was first noticed in Serbia (Walczak *et al*., 2018). From that time the species has gradually spread over the whole continent, apart from the northern- and easternmost parts, reached North Africa, the Near East and Transcaucasia (Świerczewski & Stroiński, 2011) and China in 2020 (Yuan *et al*., 2020).

S. bisonia was noticed in Southern Poland in Rzeszów for the first time in 2007, then near Warsaw in 2010 (Świerczewski & Stroiński, 2011) and at the Baltic cost at Gdańsk-Oliwa in 2015 (Brysz & Szwedo, 2015), with additional observations making a total of over 80 occurrences from Poland (Walczak *et al*., 2018). Based on these records from Poland we could assume that *Stictocephala bisonia* might have reached Lithuania some time after 2015.

S. bisonia is generally recognized as perhaps the most injurious of all the Membracidae and it has caused yield losses in orchards and vineyards in the southern part of Europe over a period of several decades. It is an occasional pest of fruit trees, causing injuries to young twigs by cutting the bark and phloem during the oviposition, frequently resulting in their dieback and facilitating a transmission of fungal and bacterial diseases (Walczak *et al*., 2018). All this considered, more attention has to be paid to a possible further spread of this species through Lithuania.

References

Brysz A., Szwedo J. 2015. Nowe stanowiska kolcoroga bizoniaka *Stictocephala bisonia* Kopp et Yonke, 1977 (Hemiptera: Cicadomorpha: Membracidae) w Polsce. *Acta entomologica silesiana* 23: 229–230.

Holzinger W. E., Kammerlander I., Nickel H. 2003. The Auchenorrhyncha of Central Europe, Fulgoromorpha, Cicadomorpha excl. Cicadellidae. Brill Publishers, 673 pp.

Ivanauskas A., Valiūnas D., Ivinskis P., Rimšaitė J. 2014. Some data on Cicadomorpha and Fulgoromorpha (Insecta, Hemiptera) of Lithuania. *New and rare for Lithuania insect species* 26: 26–30.

Söderman G., Dapkus D. 2009. New records of Hemiptera from the Čepkeliai strict Nature Reserve (Southern Lithuania) in 2007. *New and rare for Lithuania insect species* 21: 12–14.

Söderman G., Gillerfors G. Endrestøl A. 2009. An annotated catalogue of the Auchenorrhyncha of Northern Europe (Insecta, Hemiptera: Fulgoromorpha et Cicadomorpha). *Cicadina* 10: 33–69.

Söderman G., Rintala T. 2009. Heteroptera and Auchenorrhyncha (Hemiptera) collected from southeastern Lithuania in 2008. *New and Rare for Lithuania Insect Species* 21: 15–20.

Świerczewski D., Stroiński A. 2011. The first records of the Nearctic treehopper *Bisonia* in Poland (Hemiptera: Cicadomorpha: Membracidae) with some comments on this potential pest. *Polish Journal Of Entomology* 80: 13–22.

Taura L., Gudžinskas Z. 2020. Life Stages and Demography of Invasive Shrub *Cytisus scoparius* (Fabaceae) in Lithuania. *Botanica* 26(1): 1–14.

Vilbaste J. 1974. Preliminary list of Homoptera – Cicadinea of Latvia and Lithuania. *Eesti NSV Tead. Akad. Toimet*. 23: 131–163.

Walczak M., Brożek J., Junkiert Ł., Kalandyk-Kołodziejczyk M., Musik K., Kaszyca N., Łazuka A., Gierlasiński G. 2018. *Stictocephala bisonia* Kopp et Yonke, 1977 (Hemiptera: Cicadomorpha, Membracidae) in Poland. *Annals of the upper Silesian museum in Bytom, Entomology* 27: 1–13.

Yuan X., Hu K., Yuan F. 2020. The discovery of the buffalo treehopper *Stictocephala bisonia* Kopp et Yonke, 1977 (Hemiptera: Membracidae) in Taibai County, Shaanxi-a newly recorded subfamily in China. *Journal of Plant Protection* 47 (2): 461–462.

Gargara genistae ir *Stictocephala bisonia* (Hemiptera: Cicadomorpha, Membracidae), naujos Lietuvos faunos kuprotųjų cikadų rūšys

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Santrauka

Pateikti duomenys apie dviejų naujų kuprotųjų cikadų rūšių aptikimą Lietuvoje. *Gargara genistae* aptikta ant šluotinio raipsto Pietų Lietuvoje, bet galimai yra paplitusi plačiau ant šio augalo. *Stictocephala bisonia* yra iš Nearktikos kilusi rūšis, per pastarąjį šimtmetį išplitusi beveik visoje Europoje ir pasiekusi Lietuvą per Lenkiją, kur pirmą kartą stebėta 2007 metais. Lietuvoje kol kas stebėtas tik vienas individas.

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