



FAVNISTIČNI ZAPISKI / FAUNISTICAL NOTES

**FIRST REPORT OF INVASIVE SPECIES *LEPTOGLOSSUS OCCIDENTALIS* IN KOSOVO (HETEROPTERA: COREIDAE)**

Dejan KULIJER<sup>1</sup> and Halil IBRAHIMI<sup>2</sup>

<sup>1</sup> National Museum of Bosnia and Herzegovina, Zmaja od Bosne 3, 71000 Sarajevo, Bosnia and Herzegovina; dejan.kulijer@gmail.com

<sup>2</sup> Department of Biology, Faculty of Mathematical and Natural Sciences, University of Prishtina “Hasan Prishtina”, Mother Teresa p.n. 10000 Prishtina, Kosovo; halil.ibrahimi@uni-pr.edu

**Abstract** – First records of the invasive western conifer seed bug (*Leptoglossus occidentalis* Heidemann, 1910) in Kosovo are presented and discussed. This finding complements the known range of the species in the Balkan Peninsula with Albania now being the only country without confirmation of its presence.

**KEY WORDS:** alien species, Balkan Peninsula, distribution, Hemiptera, insects, Pinaceae, true bugs.

**Izvešček** – PRVO POROČANJE O INVAZIVNI VRSTI *LEPTOGLOSSUS OCCIDENTALIS* NA KOSOVU (HETEROPTERA: COREIDAE)

Predstavljeni so prvi podatki o pojavljanju tujerodne invazivne stenice storževe listonožke (*Leptoglossus occidentalis* Heidemann, 1910) na Kosovu. To poročanje dopolnjuje znano razširjenost vrste na Balkanskem polotoku, od koder je sedaj potrjena prisotnost vrste v vseh državah z izjemo Albanije.

**KLJUČNE BESEDE:** tujerodne vrste, Balkanski polotok, razširjenost, Hemiptera, storževa listonožka, Pinaceae, polkrilci.

Western conifer seed bug (*Leptoglossus occidentalis* Heidemann, 1910) is an invasive species of Nearctic origin native to the area of North America west of Rocky

Mts., from British Columbia to North Mexico (McPherson et al. 1990; Dusoulier et al. 2007). First introduction to Europe was recorded in Italy, near Vicenza in 1999 (Taylor et al. 2001). *L. occidentalis* spread fast across the continent and within 15 years it was reported from all parts of Europe, including Portugal, England, Norway, Turkey, Ukraine and Russia (Fent & Kment 2011; Gapon 2013). Although its expansion in Italy and neighboring countries was probably the result of natural spreading of established Italian population, some other isolated and mutually distant records suggest independent introductions or secondary translocations within Europe (Dusoulier et al. 2007; Rabitsch 2008).

In North America the Western conifer seed bug is considered to be a serious pest in seed orchards of conifers (e. g. McPherson et al. 1990). The species feeds on developing seeds and flowers of different conifer species, with a preference for Pinaceae, causing reduction of seed fertility. Another negative impact of *L. occidentalis* is that it can also become the nuisance to people. As the weather cools in autumn, adults search suitable sheltered overwintering places for hibernation and often aggregate in homes and other buildings, sometimes in large numbers (Fent & Kment 2011).

Although *L. occidentalis* already spread across the whole Balkan Peninsula (Fent & Kment 2011) until now it was not reported from Kosovo. This paper presents first documented and verified observations of the species for this country. Adult western conifer seed bugs were collected at four sites in eastern (13/VII/2015) and western (20/III/2016) Kosovo (Fig. 1). The sampling was carried out by handpicking and the collected specimens were preserved in 80 % ethanol. *L. occidentalis* from Batllavë Lake and Ballaban village are deposited at the Laboratory of Zoology of the Department of Biology, Faculty of Mathematical and Natural Sciences, University of Prishtina, Kosovo. One specimen from the Patriarchate of Pejë/Peć is deposited in the collections of the National Museum of Bosnia and Herzegovina in Sarajevo. Both localities in the east are situated in the area of Batllavë Lake, one of the largest lakes in Kosovo, while the localities in western part of Kosovo, Pejë Monastery and Deçan Monastery, are located at the foothills of Bjeshkët e Nemuna Mountains.



**Fig. 1:** Study area and the finding sites of *Leptoglossus occidentalis* Heidemann in Kosovo.



**Fig. 2:** *Leptoglossus occidentalis* Heidemann at Visoki Dečani/Deçan. Photo: D. Kulijer.

**Material examined:** **Loc. 1. Podujevë Municipality, Batllavë Lake**, N 42.817626° E 21.310313°, 13/VII/2015, 653 m a.s.l., 2 adults, H. Ibrahim leg. & det.; **Loc. 2. Podujevë Municipality, Ballaban village**, N 42.795226° E 21.322476°, 13/VII/2015, 682 m a.s.l., 1 adult, H. Ibrahim leg. & det.; **Loc. 3. Pejë Municipality, Garden of the Patriarchate of Peć/Pejë**, N 42.661111° E 20.265556°, 20/III/2016, 543 m a.s.l., 1 adult, D. Kulijer leg. & det; **Loc. 4. Deçan Municipality, Visoki Deçani (Deçan) Monastery**, N 42.547222° E 20.266944°, 20/III/2016, 660 m a.s.l., 6 adults, D. Kulijer leg. & det (Fig. 2).

As Balkan Peninsula is largely undersampled for *L. occidentalis* in comparison to other parts of Europe, it can be assumed that the species is much more common in the area than can be seen from available data. The recent discovery of *L. occidentalis* in Macedonia (Kulijer 2016) and now Kosovo complements the known range of the species in the Balkan Peninsula with Albania now being the only country without published data on the species presence.

*L. occidentalis* probably arrived in Kosovo through natural expansion from neighboring countries, in some of which it was known several years before (Hradil 2008; Protić 2008). Species discovery at multiple locations in different regions of Kosovo

suggests existence of an established population in the country, and not accidentally introduced individuals. It is too early to say if or what will be the effect of the western conifer seed bug to commercial forestry in Kosovo. So far in Europe there are no reports on any major damage to conifer seed orchards or forests (Rabitsch 2008). Future monitoring of this invasive species is needed as mass development could represent serious threat to the forests and seed production in forestry.

## References

- Dusoulier, F., Lupoli, R., Aberlenc, H.-P., Streito, J.-C.**, 2007: L'invasion orientale de *Leptoglossus occidentalis* en France: bilan de son extension biogéographique en 2007 (Hemiptera Coreidae). *L'Entomologiste*, 63 (6): 303–308.
- Fent, M., Kment, P.**, 2011: First record of the invasive western conifer seed bug *Leptoglossus occidentalis* (Heteroptera: Coreidae) in Turkey. *North-Western Journal of Zoology*, 7 (1): 72–80.
- Gapon, D. A.**, 2013: First records of the western conifer seed bug *Leptoglossus occidentalis* Heid. (Heteroptera, Coreidae) from Russia and Ukraine, regularities in its distribution and possibilities of its range expansion in the Palaearctic region. *Entomological Review*, 93 (2): 174–181.
- Hradil, K.**, 2008: *Leptoglossus occidentalis* (Heteroptera: Coreidae) A new alien species in Montenegro. *Acta Entomologica Serbica*, 13: 77–79.
- Kulijer, D.**, 2016: *Leptoglossus occidentalis* (Heteroptera: Coreidae) and *Harmonia axyridis* (Coleoptera: Coccinellidae), two new invasive alien species for insect fauna of Macedonia. *Ecologica Montenegrina*, 5: 22–25.
- McPherson, J. E., Packauskas, R. J., Taylor, J., O'Brien, M. F.**, 1990: Eastern range extension of *Leptoglossus occidentalis* with a key to *Leptoglossus* species of America north of Mexico (Heteroptera: Coreidae). *The Great Lakes Entomologist*, 23 (2): 99–104.
- Protić, Lj.**, 2008: *Leptoglossus occidentalis* Heidemann (Heteroptera: Coreidae) in Serbia. *Acta Entomologica Serbica*, 13: 81–84.
- Rabitsch, W.**, 2008: Alien true bugs of Europe (Insecta: Hemiptera: Heteroptera). *Zootaxa*, 1827: 1–44.
- Taylor, S. J., Tescari, G., Villa, M.** 2001: A Nearctic pest of Pinaceae accidentally introduced into Europe: *Leptoglossus occidentalis* (Heteroptera: Coreidae) in northern Italy. *Entomological News*, 112: 101–103.

Received / Prejeto: 31. 3. 2017

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Acta Entomologica Slovenica](#)

Jahr/Year: 2017

Band/Volume: [25](#)

Autor(en)/Author(s): Kulijer Dejan, Ibrahim Halil

Artikel/Article: [First report of invasive species \*Leptoglossus Occidentalis\* in Kosovo \(Heteroptera: Coreidae\) 115-118](#)