

## New information about the distribution of the western conifer seed bug *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae) in Syria

Wa'el Saleh Almatni<sup>1</sup>

<sup>1</sup>Independent researcher, Damascus, Syria  
E-mail:waelalmatni@gmail.com ORCID ID:0009-0003-5125-406X

**ABSTRACT:** New records of *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae) in Syria are reported. *L. occidentalis* has been observed in Duraykish, Coastal area; Mazraat Deir Al-Ashayer, west of Damascus and Urman, As-Sweida, southern Syria. Information on the distribution of this invasive species in the neighboring areas has been documented, too.

**KEY WORDS:** Heteroptera; Coreidae; *Leptoglossus occidentalis*; new records; Syria; East Mediterranean Region.

**To cite this article:** Almatni, W. S., 2024, New information about the distribution of the Western conifer seed bug *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae) in Syria, *J.Het.Turk.*, 6(1):9-13

**DOI:**10.5281/zenodo.11350169

**To link to this article:** <https://www.j-ht.org/wp-content/uploads/2024/05/V61-A3.pdf>

**Received:** Mar 3, 2024; **Revised:** Apr 16,2024; **Accepted:** Apr 18, 2024; **Published online:** May 31, 2024

### INTRODUCTION

The Western conifer seed bug *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae) is a highly dispersible Nearctic coreid native to western North America. It invaded the old world and colonized the major part of Europe since its first appearance in Italy, near Vicenza (Veneto region) in 1999 (Tescari, 2001) (see EPPO

RS 2006/160). This species has been reported from several European countries, especially in the Mediterranean Region (van der Heyden, 2019; van der Heyden & Zettel, 2019). *Leptoglossus occidentalis* is considered an invasive alien species spreading in Europe (EPPO Reporting Service no. 01 – 2010, Num. article:2010/009).

The first observation in Türkiye was in



Sariyer-Istanbul in 2009 (Arslangündođdu & Hizal, 2010), and the insect later spread to various cities of Türkiye (Fent & Kment, 2011; Hizal & Inan, 2012; Öttemiz & Dođanlar, 2015; Çerçi & Koçak, 2016; Özgen et al., 2017; Parlak, 2017; Yücel & Kivan, 2018; Zengin & Dursun, 2019; Ođuzođlu & Avcı, 2020; Akman & Dursun, 2021) and reached Antalya in 2014. In south east Türkiye, near the Syrian border, Cihan Arıkan observed *L. occidentalis* in 01-11-2020 in Cumhuriyet, 80440 Osmaniye Merkez/Osmaniye, North Hatay, Türkiye (<https://www.inaturalist.org/observations/63945005>). Wantedhg observed *L. occidentalis* in 02-11-2023 in İskenderun Arsuz Yolu, Arsuz, Hatay, Türkiye (<https://www.inaturalist.org/observations/189747941>).

Recently, this insect has been recorded in the East Mediterranean: from Lebanon (Nemer, 2015; Nemer et al., 2019), the Golan Heights (van der Heyden, 2018), Israel (van der Heyden, 2019), and Palestine (Handal & Qumsiyeh, 2019). Jordan didn't report this invasive species yet.

*Leptoglossus occidentalis* made severe damage on pine cones in pine forests in Lebanon, and the government controlled it by chemical insecticides in 2015 and later ([www.elnashra.com/news/2015](http://www.elnashra.com/news/2015)).

The first observation in Syria was done by Re'ut Ben Elissar on 12-11-2016 in Odem (an Israeli settlement), near Baq'atha, Northern part of the Golan Heights (van der Heyden, 2018).

## MATERIAL AND METHODS

Field check of the presence of *L. occidentalis* was done between September and November 2023

on several pine locations in Syria. Also, data survey and review in scientific sites, like the "Syrian Wildlife Hobbyists" on Facebook, and [www.iNaturalist.org](http://www.iNaturalist.org) has been done.

## RESULTS

*Leptoglossus occidentalis* Heidemann, 1910 has been mentioned in this study survey in three regions of Syria (Figs.1-3)



**Figure 1.** Nymphs, Coastal area: Soliman Hassan, 20-06-2021, 34.901, 36.147, Duraykish (Draykish), Tartous, Syria. Near a Pine forest.



**Figure 2.** Adults, Anti-Lebanon mountains Raef Hakim, 10-10-2021, 33.591, 36.047, Mazraat Deir Al-Ashayer, Anti-Lebanon Mountains, western Reef Damascus. In a Pine forest.



**Figure 3.** Adults, Alarab mountain (southern area): Wa'el Almatni, 29-09-2023 32.513533, 36.764582, Urman, Sweida, Syria. In a house near pine trees in the village.

These three observations represent three geographic regions in Syria: coastal mountains in the west, anti-Lebanon mountains in the middle western Syria, and As-Sweida mountains in the south (Fig. 4). Pine trees and forests are distributed in that areas.

## DISCUSSION

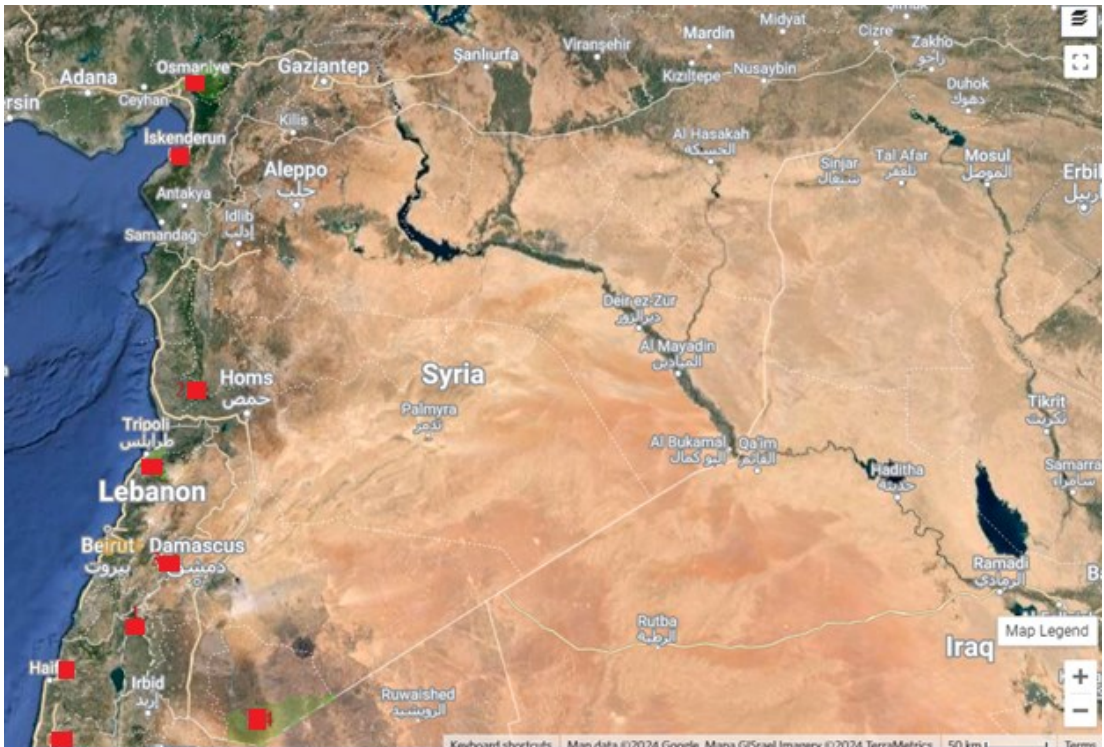
The economic impact of this invasive insect is still not clear in East Mediterranean countries. Lebanon confirmed its economic damage of conifer forests. For example, at the beginning of the presence of this insect in Lebanon, Air Force helicopters sprayed insecticides to control the species over the fruitful pine forests in Mount Lebanon (Almatn). The mission included the areas of: Qarnayel, Salima, Al-Arbaniyah, Arsoun, Jourat Arsoun, Al-Qasiba, Zandouqa, Qartadah, Ras Al-Matn, Deir Al-Harf, Btakhnia, and Al-Kina. (Alnashra news, 2015). In Syria, although it has been mentioned a few

years ago, as this study explains, there is no economic damage recorded or observed.

Since *L. occidentalis* has become present in Syria, its spread in forests and gardens must be carefully investigated, and its potential damage should be studied, especially on stone pine *Pinus pinea*. This insect is also possible to be present in Jordan, since this research recorded it in an area about 30 km from the Jordanian border.

## ACKNOWLEDGEMENTS

I would like to present my thanks to Torsten van der Heyden (Hamburg, GERMANY) for his cooperation in identification of the insect sample and reviewing the manuscript of this article, and to the "Syrian Wildlife Hobbyists" on Facebook, for the discoveries and scientific information that they present while identifying organisms in the Syrian wildlife.



**Figure 4.** Distribution map of *Leptoglossus occidentalis* in Syria and neighboring areas (Red dots). Numbers besides the dots refer to the registration date sequence.

## REFERENCES

- Akman, N., Dursun, A., 2021, A study on the Coreoidea (Hemiptera: Heteroptera) fauna of Çorum Province, *J.Het.Turk.*, 3 (2):157-170.
- Arslangündođdu, Z., Hızal, E., 2010, The Western Conifer Seed Bug, *Leptoglossus occidentalis* (Heidemann, 1910), recorded in Turkey (Heteroptera: Coreidae). *Zoology in the Middle East*, 138-139.
- Çerçi, B., Koçak, Ö., 2016, Contribution to the Knowledge of Heteroptera (Hemiptera) Fauna Of Turkey. *Journal of Insect Biodiversity*, 4(15), 1-18.
- EPPO Reporting Service no. 01 – 2010. Num. article: 2010/009
- EPPO RS 2006/160
- 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.
- Handal, E. N., Qumsiyeh, M. B., 2019, First record of the Western conifer seed bug, *Leptoglossus occidentalis* Heidemann, 1910 (Hemiptera, Coreidae), from Palestine. *Jordan Journal of Biological Sciences*, 12(5), 657-658.
- Hızal, E., İnan, M., 2012, *Leptoglossus occidentalis* (Heidemann, 1910) is an invasive insect species. *Bartın Orman Fakültesi Dergisi*, 14 (1), 56-61.
- Nemer, N., 2015, Report on insect pests associated with conelet losses and their management in *Pinus pinea* forests in Lebanon. FAO, Rome 45 pp.
- Nemer, N., El Khoury, Y., Noujeim, E., Zgheib, Y., Tarasco, E., van der Heyden, T., 2019, First records of the invasive species *Leptoglossus occidentalis* Heidemann (Hemiptera: Coreidae) on different coniferous species including the cedars of Lebanon. *Revista Chilena de Entomologia*, 45(4), 507-513.
- Oğuzođlu, Ş., Avcı, M., 2020, Türkiye’de *Leptoglossus occidentalis* Heidemann, 1910 (Hemiptera: Coreidae) Üzerine Biyolojik Gözlemler, Parazitoitleri ve Yayılışına Katkılar. *Ormançılık Araştırma Dergisi*, 7 (1), 9-21
- Özgen, İ., Dioli, P. ve Çelik, V., 2017. New and Interesting Record of Western Conifer Seed Bug: *Leptoglossus occidentalis* (Heidemann, 1910) (Heteroptera: Coreidae) in Eastern Turkey. *Journal of Entomology and Zoology Studies*, 5(5), 830-833.
- Öztemiz, S., Doğanlar, M., 2015, Invasive plant pests (Insecta and Acarina) of Turkey. *Munis Entomology & Zoology*, 10 (1), 144-159.
- Parlak, S., 2017, An Invasive Species: *Leptoglossus occidentalis* (Heidemann) How Does it Affect Forestry Activities. *Journal of Forestry Faculty*, 17(3), 531-542.
- Tescari, G., 2001, *Leptoglossus occidentalis*, nearctic coreid discovered in Italy (Heteroptera, Coreidae)]. *Lavori della Società Veneziana di Scienze Naturali*, 26, 3-5.
- van der Heyden, T., 2018, First record of *Leptoglossus occidentalis* Heidemann, 1910 (Hemiptera: Heteroptera: Coreidae: Coreinae: Anisoscelini) in the Golan Heights. *Revista gaditana de Entomologia*, 9(1), 1-3.
- van der Heyden, T., 2019, *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae: Coreinae: Anisoscelini) in Israel. *Revista Chilena de Entomologia*, 45(3), 435-437.
- van der Heyden T., Zettel, H. 2019, First record of *Leptoglossus occidentalis* Heidemann, 1910 (Heteroptera: Coreidae) from Cyprus. *Zeitschrift der Arbeitsgemeinschaft Österr. Entomologen*, 71, 177-178.
- Yücel, S. A., Kıvan, M., 2018, İstanbul Göztepe Parkı Gül Bahçesinde Bulunan Zararlı Hemiptera ve Hymenoptera Türleri. *Tekirdağ Ziraat Fakültesi Dergisi*, 15(2), 95-100.
- Zengin, P., Dursun, A., 2019, A study on the Coreoidea (Hemiptera: Heteroptera) Fauna of Amasya Province, Turkey. *Acta Biologica Turcica*, 32(3), 160-167.
- أدرج في *Leptoglossus* حشرة لمكافحة مبيدات رش الجيش السنوي (elnashra.com). <https://www.elnashra.com/news/201>