

The second record of *Stephanitis lauri* Rietschel, 2014 (Hemiptera: Heteroptera: Tingidae) on mainland Greece

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ABSTRACT: *Stephanitis lauri* Rietschel, 2014 was identified in September 2025 on infested Mediterranean laurel (*Laurus nobilis* L.) near Kassandreia town on the Halkidiki Peninsula, and representing the second record of the species on the Greek mainland. The first record from the Greek mainland was recently reported from Xanthi. This study also provides an overview of the distribution of the genus *Stephanitis* in the Palearctic Region.

KEYWORDS: *Stephanitis lauri*, Greece, second record, Halkidiki

INTRODUCTION

The genus *Stephanitis* (Hemiptera: Tingidae) comprises 53 species/subspecies in three subgenera (*Menadora* Horváth, 1912, *Norba* Horváth, 1912, and *Stephanitis* Stål, 1873) in the Palearctic Region. The species belonging to the subgenera *Menadora* and *Norba* are restricted to in East Asia (e.g., China, Japan, and Taiwan), whereas only nine species of to the subgenus *Stephanitis* are occur in West Asia and Europe; the other species, like those of the other two subgenera, are distributed in East Asia and other

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regions (Aukema, 2018). Of these species in Europe and West Asia, only five (*Stephanitis caucasica* Kiritshenko, 1951, *Stephanitis chlorophana* (Fieber, 1861), *Stephanitis oberti* (Kolenati, 1857), *Stephanitis oschanini* Vasiliev, 1935, *Stephanitis pyri* (Fabricius, 1775)), are originally native; three (*Stephanitis pyrioides* (Scott, 1874), *Stephanitis rhododendri* Horváth, 1905, *Stephanitis takeyai* Drake & Maa, 1955) were introduced later (Rietschel, 2013). The origin of *Stephanitis lauri* Rietschel, 2014 is currently unclear.

Stephanitis spp. are known for their ability to spread in large numbers and cause significant crop damage when transported with ornamental or economically valuable host plants. In temperate latitudes, they damage stone and pome fruits, as well as azaleas and rhododendrons.

In tropical and subtropical regions, they affect host plants such as avocado, banana, cherimoya, turmeric, ginger, date, camellia/tea, prickly pear, star anise, cinnamon, and custard apple. Most of their host plants belong to the Ericaceae or Rosaceae families (Rietschel, 2013).

S. pyri, a well-known species also called the pear lace bug, has a wide distribution in Europe and is found in several countries in Asia and North Africa (Aukema, 2018). It is a pest of other Rosaceae species, especially pear and cherry (Rietschel, 2013). *S. oberti*, *S. rhododendri*, and *S. pyrioides* damage rhododendrons in Central and Western Europe, while *S. caucasica* is found on rhododendrons at high altitudes in the Caucasus and Anatolia. *S. rhododendri* is mainly native to North America, and *S. pyrioides* to Japan. *S. chlorophana*, seen in the Western Mediterranean, is rare and has only been occasionally recorded on Mediterranean viburnum (*Viburnum tinus* L.) in Portugal, Spain, and North Africa. Another invasive species, thought to have been brought from East Asia along with ornamental plants, is the Andromeda lace bug, *S. takeyai*, which has become noteworthy in Europe since the beginning of the millennium due to its mass proliferation on the Japanese Andromeda plant [*Pieris japonica* (Thunberg)] (Rietschel, 2013). Data on the host plants of *S. oschanini*, which has also been detected in the Middle East and the European part of Türkiye, are not available.

Stephanitis pyri, *S. pyrioides*, and *S. lauri* are known from Greece. *S. lauri* was first described from the island of Crete in Greece (Rietschel, 2013, 2014). Initially considered endemic to Crete, it has since been recorded in countries bordering the Mediterranean, France (Streito et al., 2018), Italy (Abenaim et al., 2020), Spain (Riba-Flinch & Goula, 2021), Portugal (Cherpitel & Filipe, 2024), and finally in Xanthi in the Eastern Macedonia and Thrace region of mainland Greece (Tsikas & Karanikola, 2025). All studies on this species, including this one, show that it is related to laurel and causes significant damage to it by settling on the underside of its leaves, similar to the damage caused to host plants by other Tingidae species, *Corythucha arcuata* (Say, 1832) and *Corythucha ciliata* (Say, 1832).

MATERIALS AND METHODS

Specimens of *Stephanitis lauri* were observed in September 2025 during a field survey on Halkidiki Island, Greece, near the town of Kassandreia (40°04'46"N, 23°26'44"E), on laurel trees (*Laurus nobilis* L.) at an altitude of 45 m (Fig. 1). The identification of the samples was based on Rietschel (2014) and Arnaud & Roberti (2020). The material was identified using an Olympus SZ51 stereomicroscope. The photographs were taken using a My Scope Professional Trinocular Stereomicroscope.

Stephanitis lauri was first described from the island of Crete and has subsequently been recorded in European countries bordering the Mediterranean Sea. Its spread is

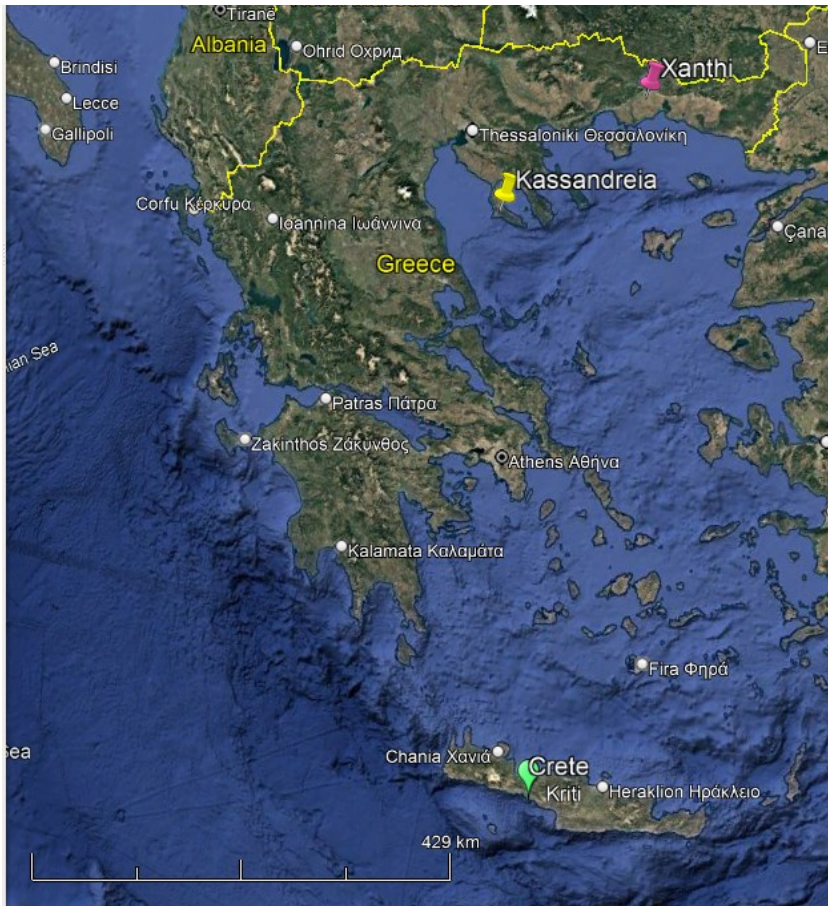


Figure 1. The locations where *Stephanitis lauri* was found in Greece. Crete (Rietschel, 2014), Xanthi (Tsikas & Karanikola, 2025), Kassandreia (present study).

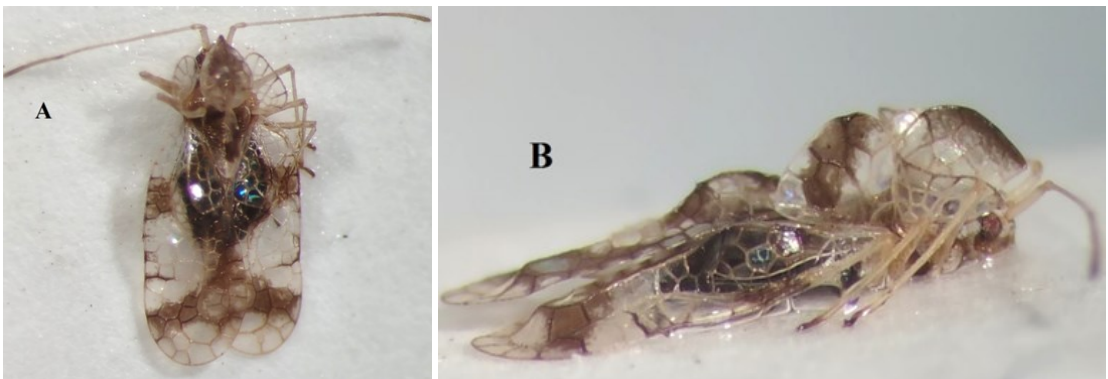


Figure 2. *Stephanitis lauri* Rietschel, 2014 habitus, A. Dorsal view, B. Lateral view

likely associated with its host plant, *Laurus nobilis*. Laurel, a member of the Lauraceae family, has significant economic importance due to its use as an ornamental tree or hedge in city parks, botanical gardens, and private gardens, and its use worldwide as a spice and flavoring agent in the culinary and food industries.

It is naturally widespread in many countries in the Mediterranean basin, along the Atlantic coast of the Iberian Peninsula, and on the southern coast of the Black Sea, but is also cultivated in warmer regions of America, East Asia, the Balkans, and Anatolia (Tsikas & Karanikola, 2025).

In all studies, including Crete, where the species was first described, as well as in France, Italy, Spain, Portugal, and most recently in Xanthi on the Greek mainland, a close relationship with *Laurus nobilis* L. has been observed, and chlorotic discoloration due to feeding has been detected on the leaves of the tree, along with black spots on the undersides of the leaves due to the insect's excrement (Rietschel, 2013, 2014; Streito et al., 2018; Abenaim et al., 2020; Riba-Flinch & Goula, 2021; Cherpitel & Filipe, 2024; Tsikas & Karanikola, 2025). Similar observations were made in the present study, and adult specimens were found on the underside of laurel leaves, showing chlorotic discoloration due to feeding (Fig. 3).



Figure 3. Damage caused by *Stephanitis lauri* on the leaves of *Laurus nobilis* in Kassandrea (Halkidiki Peninsula).

Although *Laurus nobilis* L. currently appears to be the primary host, Abenaim et al. (2020) observed several isolated adults on the leaves of another species from the Lauraceae family, *Cinnamomum camphora* (L.), in their findings in Italy. It remains unclear whether this species poses a significant risk to other Lauraceae species.

There is currently no definitive conclusion regarding the origin and distribution of the species. However, Rietschel (2013) reports that there are no records of any *Stephanitis* species feeding on Lauraceae species in Europe, and that several *Stephanitis* species live on *Cinnamomum*, *Machilus*, and other Lauraceae species in Japan and Korea, but none of these species match the morphological and genital structures of the Cretan species.

In this case, either the origin of this species is the island of Crete and it spread to Europe from there, or it may be a previously undescribed foreign species that was somehow introduced to Crete and Europe from East Asia. Indeed, Streito et al. (2018) suggest that it may be a *Stephanitis* species related to an East Asian Lauraceae host plant and that it may have first established itself in Crete before spreading to France. Riba-Flinch & Goula (2021) suggest that accidental introduction via the import of ornamental Lauraceae plants from East Asia is a plausible explanation, and that its simultaneous detection in multiple European locations after its initial detection in Crete suggests independent introductions, which could be possible either through infested host plants from Asia or through intra-EU plant trade. Tsikas & Karanikola (2025) suggest a second option: that it is a Mediterranean species that recently transitioned from a previously unknown host plant to *L. nobilis*. We believe that molecular-level studies on the species will shed light on this issue.

Finally, the detection of *S. lauri* on the Greek mainland, first in Xanthi (Tsikas & Karanikola, 2025) and then near Kassandreia on the Halkidiki Peninsula (present study), suggests that it may be much more widespread on the mainland. Studies show that this species, like other Tingidae (*Corythucha arcuata*, *Corythucha ciliata*) and other *Stephanitis* species, is highly damaging to its host plant and has a high potential for spread.

The species may spread to other countries where laurel is found artificially or naturally (such as the Balkan countries and Türkiye), and necessary precautions should be taken.

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