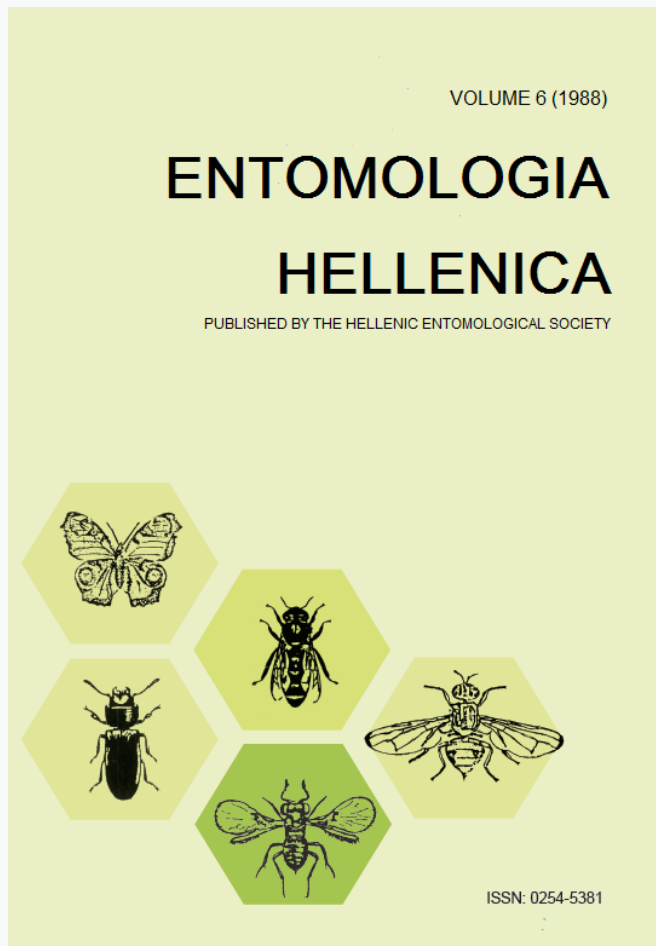


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First Records of the Sycamore Lace Bug, *Corythucha ciliata* (Say), in Greece¹

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In late August 1988, the author noticed the presence of *Corythucha ciliata* (Say) (Hemiptera: Tingidae) in many plane trees of the following locations of northwestern Greece: 1) City of Kastoria, on 22.VIII.1988, along the coastal road of the city's peninsula in Lake Orestias. Along this road, trees near the Panaghia Mavriotissa church were heavily infested, while trees further away were less so. Infested trees were also noticed along the quay of the northern end of the city. 2) Zagori, Epirus, on 24.VIII.1988, on the banks of the river Voidomatis, where the river meets the road between the villages Aristi and Papingo. The degree of infestation varied between adjacent trees. 3) Zagori, Epirus, on 25.VIII.1988, the single plane tree in the middle of the square of the village Eptahori. 4) City of Yannina, on 26.VIII.1988, several single trees in the Kastro section of the city and also trees along the banks of the lake bordering the city. As heavily infested were recorded trees having most of their leaves chlorotic in the largest part of their laminae.

On the underside of leaves that could be reached from the ground live adults, exuviae of immature stages and dark spots typical of excrement and of oviposition sites of Tingidae were found. On certain leaves more than 10 live adults per leaf were counted in Kastoria and Yannina. The identity of the species was determined by the author on adult specimens from Kastoria preserved dry and in ethanol.

The fact that the infested locations were tens of kilometers apart and at considerably differ-

ent altitudes, leads to the conclusion that *C. ciliata* must have crossed the Greek northwestern border not less than two years ago. It is suspected that the insect entered Greece by natural spread from neighboring Albania. Examination by the author of plane trees in towns and villages of the Pella and Kilkis prefectures near the Yugoslavian border, showed no infestation.

C. ciliata is of nearctic origin. In the northeastern and northwestern United States it is a pest of sycamore, *Platanus occidentalis* L., which is its preferred host plant, but also feeds on ash, hickory and, according to Craighead (1960), also on mulberry. In Europe the host plants of preference are *Platanus X acerifolia* (Aiton) Willd. and *P. orientalis* L., while such other broad-leaved trees as *Brussonetia papyrifera* and ash are also reported as able to support the insect (Servadei et al. 1972). The insect entered Europe and was noted first in Italy in 1964 (Servadei et al. 1972). Its spread was rather rapid, so that by 1986 it had spread to all the regions of Italy (Arzone 1986, Tavella and Arzone 1987 and references therein). In 1976 chemical control tests against it were reported from Hungary (Jasinka 1981). Its presence in Yugoslavia was reported in 1972, in France in 1977, in Spain in 1981, in Switzerland in 1983 and in Austria in 1984 (for references see Tavella and Arzone 1987). It is considered one of the three most important insects infesting the leaves of plane trees in Italy (Tiberi et al. 1978) and generally very destructive (Tremblay 1981).

The adult insect is approximately 3 to 3.5 mm long and has reticulate front wings and reticulate expansions of the pronotum (Fig. 1). The pronotum is yellowish, largely expanded on the sides which are transparent, and has a median vesicated process. The front wings are subquadrangular and have a proximal vesica which is globular and more or less smoky towards its internal margin (Servadei et al. 1972). Two to three generations per year have been reported in Italy, same as in the northeastern United States. Hibernation takes place in the adult stage, mostly under loose bark at the basal part of the trunk or in other protected places nearby. In spring, the adults move to the young leaves, where they lay their eggs on the under-

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side of the blade where the immature stages feed and develop and the long-lived adults remain feeding and reproducing. The feeding punctures cause chlorosis which starts from the basal part of the leaf and may expand to almost the whole leaf. On the underside of leaves, where the insect lives in colonies, there are usually numerous small dark spots. Heavily infested species of *Platanus*, in addition to extensive yellowing, may undergo premature leaf drop.

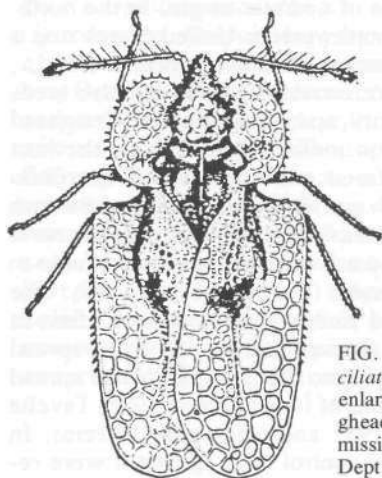


FIG. 1. *Corythucha ciliata* adult greatly enlarged. (After Craighead 1950, by permission of the U.S. Dept. of Agriculture).

In Italy and especially in urban areas, *C. ciliata* continues to cause concern because of the weakening of plane trees which predisposes them to attacks by other enemies (Tavella and Arzone 1987).

There is no doubt that the spread of *C. ciliata* in Greece will also be fairly rapid. The authorities should take advantage of the extensive work done in Italy, to further develop effective and ecologically sound control measures. Determining the resistance to the insect of *Platanus* stock available in Greece should be among the projects to be encouraged.

Acknowledgment

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KEY WORDS: *Corythucha ciliata*, *Platanus* insects, Sycamore lace bug, Tingidae

Πρώτη Διαπίστωση του *Corythucha ciliata* (Say) στην Ελλάδα

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ΠΕΡΙΛΗΨΗ

Το Ημίπτερο *Corythucha ciliata* (Say) της οικογένειας Tingidae παρατηρήθηκε από τον συγγραφέα για πρώτη φορά στην Καστοριά, στο Ζαγόρι και στα Γιάννενα, σε πλατάνια. Το ότι οι ανωτέρω προσβλημένες τοποθεσίες απέχουν δεκάδες χιλιόμετρα μεταξύ τους και διαφέρουν αισθητά σε υψόμετρο, οδηγεί στο συμπέρασμα ότι το έντομο πήκε στην Ελλάδα πριν από δύο τουλάχιστον έτη. Το ενήλικο έχει μήκος περίπου 3 με 3,5 mm και υπόλευκες, διαφανείς, σαν δαντέλα πρόσθιες πτέρυγες. Το πρόνωτο είναι κιτρινωπό και έχει δύο πλάγιες και μία νωτιαία σακκοειδή επίσης δικτυωτές υπόλευκες προεκτάσεις. Συμπληρώνει 2 με 3 γενεές το έτος στην Ιταλία όπως και στις ανατολικές Η.Π.Α. απ' όπου προέρχεται. Διαχειμαρίζει ως ενήλικο κάτω από το ξηρόφλοιο του κορμού των πλατανιών ή σε άλλες κοντινές προφυλαγ-

μένες θέσεις. Την άνοιξη φωτοκεί στην κάτω επιφάνεια των νέων φύλλων όπου αναπτύσσονται τα ανήλικα στάδια. Τα νύματά του προκαλούν χλώρωση που, σε σοβαρές προσβολές ευπαθών ειδών, εκτείνεται

σε ολόκληρο σχεδόν το έλασμα του φύλλου και μπορεί να προκαλέσει και πρόωρη φυλλόπτωση. Στην Ιταλία θεωρείται ένα από τα τρία πιο βλαβερά έντομα που προσβάλλουν τα φύλλα των πλατάνων.

Santorini Caused by the
Hymenoptera *Corythucha*
viripes and *Ouleta* *immaculata*

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C. viripes and *O. immaculata* are the most important phytophagous insects of Santorini, causing the damage of the olive trees of the island. The population of *C. viripes* on Santorini is about 200,000 individuals per hectare (Moirakis 1981). The olive groves of Santorini consist of 100,000 hectares and 60% of the olive trees are infected. The olive trees are covered with the insects in June.

During winter the olive trees of Santorini are covered by colonies of *C. viripes* insects consisting of 100,000 individuals per hectare. In the spring they have enough for nutrition to build their eggs and their ovipositors. In the end of the winter, they start to lay the eggs of the insects which they have laid for their own reproduction.

O. immaculata was first seen in Santorini in the spring and summer of 1981, 1985 and 1988. Their collecting sites were places of olive trees and points of olive trees in the island. In winter the insects which the adults emerged in the spring and summer also were collected with sweeping nets from the surrounding area and from olive trees. Plants which were visited in winter by these insects for oviposition were also collected from 1981 to 1988.

The insects were collected by the following

method: during winter, the olive trees were covered by colonies of *C. viripes* and *O. immaculata* insects. In the spring and summer, the insects were collected with sweeping nets from the surrounding area and from olive trees. The number of insects collected in the field of the olive trees was about 100,000 and 1,000,000 respectively during the winter, spring and summer of the years 1981, 1985 and 1988. The insects were collected from the olive trees in Santorini during the winter of 1981, 1985 and 1988. The insects were collected from the olive trees in Santorini during the winter of 1981, 1985 and 1988. The insects were collected from the olive trees in Santorini during the winter of 1981, 1985 and 1988.

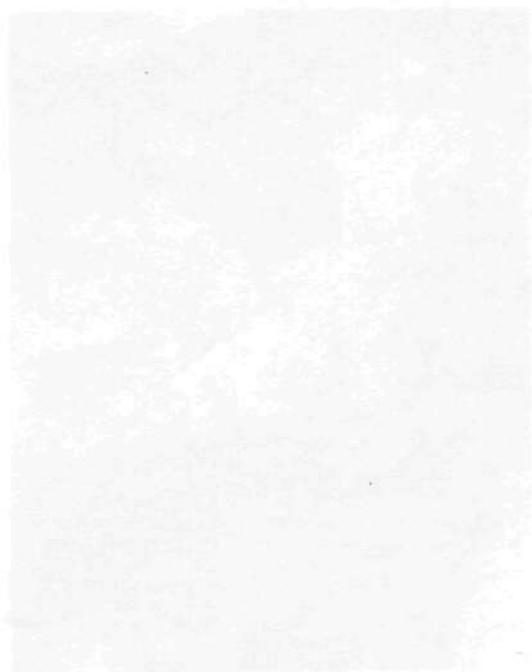


Fig. 1. *Corythucha viripes* (Hymenoptera: Cynipidae) on the leaf of the olive tree in Santorini during the winter of 1981.