

## First Records of the Sycamore Lace Bug, *Corythucha ciliata* (Say), in Greece<sup>1</sup>

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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.

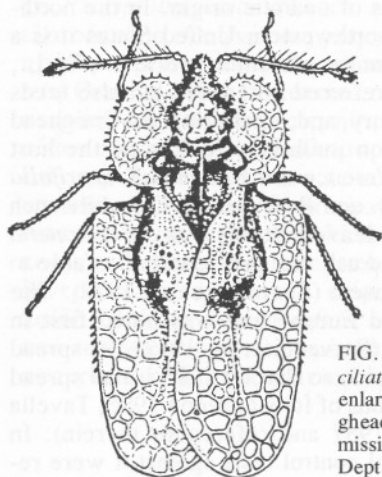


FIG. 1. *Corythucha ciliata* adult greatly enlarged. (After Craighead 1950, by permission of the U.S. Dept. of Agriculture).

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.

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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. Διαχειμάζει ως ενήλικο κάτω από το ξηρόφλοιο του κορμού των πλατανιών ή σε άλλες κοντινές προφυλαγ-

μένες θέσεις. Την άνοιξη ωοτοκεί 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 *Anthophora  
crinipes* and *Osmia latreillei*

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One of the most important archaeological findings of recent years has been the discovery of complete buildings of a Bronze Age settlement at Akrotiri on the island of Santorini (Thera). The settlement covers an area of over 200,000 square metres (Doxiadis 1983). The excavations conducted by Spyros Makriotis brought to light a large number of buildings—constructed of stones, mud and straw—with vaulted roofs. The walls were faced with clay (Doxiadis 1987).

Almost every exposed surface of masonry in the settlement has been invaded by colonies of Hymenopterous insects consisting bees which are wearing holes in the walls, because they bore through the masonry to build their nests and then every time they go in and out of the tunnels, they wear away the dust of the walls which they have built for their own nests.

Observations were carried out at Akrotiri in the spring and summer of 1985, 1986 and 1987. Glass collecting tubes were placed at entry and exit points and at various places in the tunnels, to collect the insects when the adults emerged in the spring, and ulcers also were collected with sweeping nets from the surrounding area and from light traps. Plants which were visited by adults of these species for pollen and nectar were also collected from around about.

The insect species collected by these various

*Anthophora crinipes* (Hymenoptera: Megachilidae), *Anthophora crinipes* Guenée, 1854 (Hymenoptera: Anthophorini) and *Osmia latreillei* (Hymenoptera: Megachilidae) 1870 (Hymenoptera: Megachilidae).

These three species were collected in observation yards in places under excavation. Of these *A. crinipes* and *O. latreillei*, which are solitary species, both build colonies with tunnels a short distance apart but not actually touching each other. The number of such colonies in the walls of the Akrotiri settlement is fairly large, and conspicuous through the holes of entrance and exit of the insects (Fig. 1). An ulcus of masonry is a product of *A. crinipes* (Tzani personal observations). It is known from the literature that all species of the genus *Melissopteryx* or *Anthophora* species (Tzani 1987, Hobbs et al. 1991).

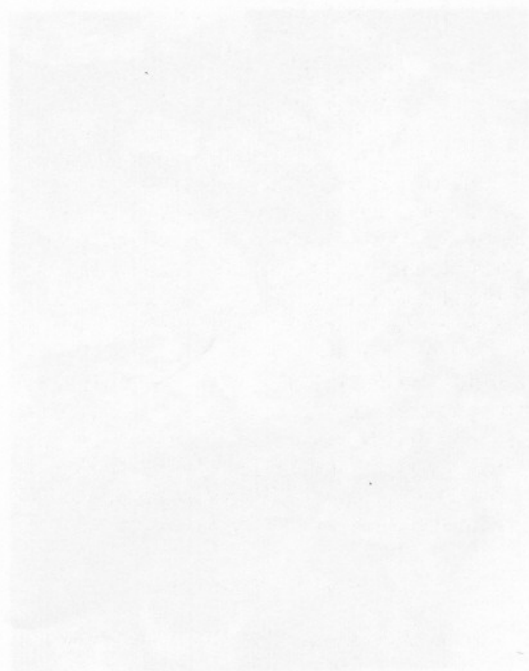


FIG. 1. Holes of bees of *A. crinipes* and *O. latreillei* in the wall of the archaeological settlement, Akrotiri, Santorini.