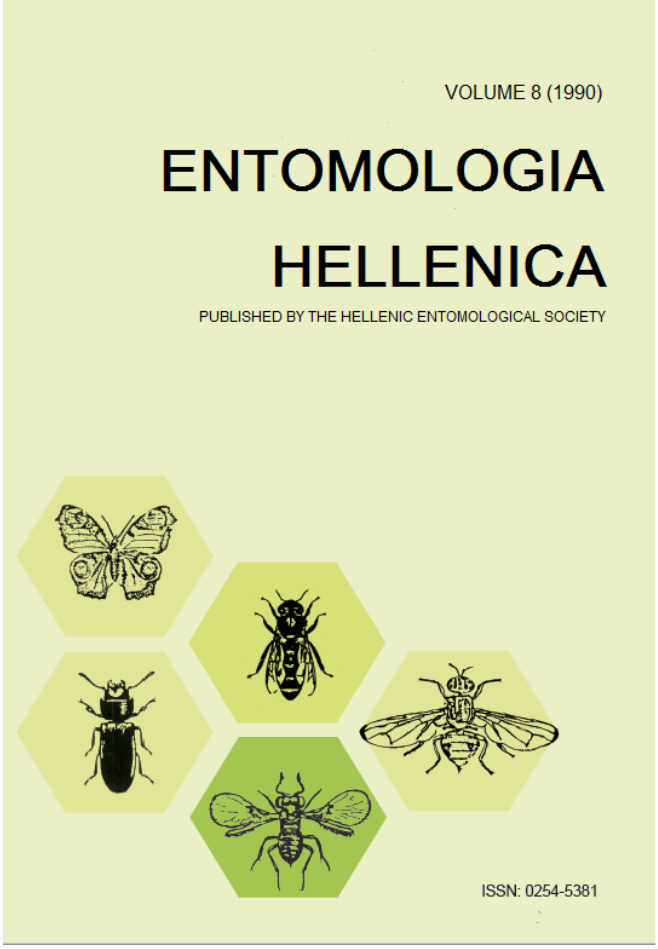
ENTOMOLOGIA HELLENICA

Vol 8 (1990)



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doi: 10.12681/eh.13984

To cite this article:

Lykouressis, D. (1990). First record of Aphis citricola van der Goot (Homoptera: Aphididae) on citrus in Southern Greece. *ENTOMOLOGIA HELLENICA*, *8*, 65–66. https://doi.org/10.12681/eh.13984

ENTOMOLOGIA HELLENICA 8 (1990): 65-66

First Record of *Aphis citricola* van der Goot (Homoptera: Aphididae) on Citrus in Southern Greece[1]

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The green citrus aphid, *Aphis citricola* van der Goot, known also as spiraea aphid, *Aphis spiraecola* Patch, was first noticed in an orange grove, cv Washington navel, in Korinthia southern Greece during spring 1986. It was collected from tender shoots as early as about mid March and was also found in large numbers in samples taken during April and May and in lesser numbers in October and November of the same year. It was also collected from clementine trees during May. During 1987 this species was also present in samples taken from another orange grove, cv Washington navel, located in the Co. Korinthia as well. It was found later in the season, in May, as compared with the previous year. That was due to the snow and the extremely cold weather that occurred during March, which resulted in the destruction of young growth and hence in the delay of the aphid appearance.

A. citricola has been previously recorded in Greece on *Matricaria chamomilla* L., *Crataegus pyracantha* Pers. and *Solanum tuberosum* L. (Argyriou 1970), on *Zinnia elegans* Jacq (Santorini 1977), and on *Prunus armeniaca* L. and *Pimpinella anisum* L. (Santas 1980).

A. citricola is a small aphid with 1.2-2.2 mm length and body yellowish green to apple green. Siphunculi and cauda are dark brown and the head is brown in apterae. It is very similar to *Aphis pomi* De Geer and is often confused with it in the literature, especially on Rosaceae (Blackman and Eastop 1985). According to Blackman and Eastop (1985) *A. pomi* has lateral tubercles on abdominal segments 2-4, rarely fewer than 14 hairs on cauda and length of the last rostral segment more than 130 μm. *A. citricola* has no lateral tubercles on abdominal segments 2-4, usually fewer than 12 hairs on cauda, and last rostral segment less than 120 μm in length. One more difference, stated by Zehavi and Rosen (1987), concerns the shape of the cauda which is "more elongate and visibly notched at base" in *A. citricola* than in *A. pomi*.

A. citricola causes curling and distortion of the leaves, especially of those near apices of tender shoots of the host plants. This is very characteristic in certain citrus such as orange and clementine trees. It is a highly polyphagus species that occurs on hosts belonging to more than 20 families, including Amaranthaceae, Caprifoliaceae, Compositae, Euphorbiaceae, Rosaceae, Rubiaceae, Rutaceae, Urticaceae and Verbenaceae but is of particular importance on citrus (Blackman and Eastop 1985, Zehavi and Rosen 1987).

A. citricola is considered the most harmful aphid species for orange, mandarine and clementine trees in Italy and in other citrus growing countries of the Mediterranean basin (Barbagallo and Patti 1986). This species was known in North America at least since 1907 and was introduced to the Mediterranean region in about 1931 (Blackman and Eastop 1985). Barbagallo and Patti (1986) has reported that it appeared in citrus groves in Mediterranean countries almost 20 years ago, while it was first recorded in Israel in 1970 and became a major pest in citrus groves in 1973 (Porath et al. 1974). It is a vector of citrus tristeza virus (Blackman and Eastop 1985), but its ability for transmitting this virus is much lower than that of *Toxoptera citricidus* (Kirkaldy) (Barbagallo and Patti 1986).

A. citricola may reproduce either anholocyclically or holocyclically. Anholocyclic reproduction occurs in many parts of the world and is considered as more frequent (Barbagallo 1966, Blackman and Eastop 1985). Nevertheless, holocyclic reproduction also occurs, and in this case, the genus *Spiraea* of Rosaceae is the primary host (Barbagallo 1966), although Komazaki et al. (1979) reported that oviposition may take place on the same citrus trees in Japan. Komazaki (1982) found that the intrinsic rate of natural increase of the aphid at-

[1] Received for publication December 7, 1990.

tained its maximum at a constant temperature near 27°C.

The numbers of *A. citricola* found in the samples from cv Washington navel were large and higher than those of *Toxoptera aurantii* (Boyer de Fonscolombe), when the latter species was present. With the assumption that such large numbers occur also in other areas of the country, *A. citricola* should be the dominant and most harmful aphid species on citrus in Greece, as this is the case in other Mediterranean countries.

Acknowledgment

Thanks are due to Professor G. Remaudière, Institute Pasteur Paris, for the identification of *Aphis citricola* van der Goot.

References

Argyriou, L.C. 1970. Les aphides nuisibles aux agrumes en Grèce et leurs ennemis naturels. Annls Inst. Phytopath. Benaki (N.S.) 9: 114-117.

Barbagallo, S. 1966. Contributo alla conoscenza degli afidi degli argumi. I. *Aphis spiraecola* Patch. Boll. Lab. Ent. Agr. Portici 24: 49-83.

Barbagallo, S. and I. Patti. 1986. The citrus aphids: behaviour, damages and integrated control. In: Integrated Pest Control in Citrus-Groves (Cavalloro, R. and E. Di Martino eds.). A.A. Balkema, Rotterdam: 67-75.

Blackman, R.L. and V.F. Eastop. 1985. Aphids on the world's crops. An identification guide. John Wiley and Sons, Chichester 466 pp.

Komazaki, S. 1982. Effects of constant temperatures on population growth of three aphid species, *Toxoptera citricidus* (Kirkaldy), *Aphis citricola* van der Goot and *Aphis gossypii* Glover (Homoptera: Aphididae) in citrus. Appl. Ent. Zool. 17: 75-81.

Komazaki, S., Y. Sakagami and R. Korenaga. 1979. Overwintering of aphids on citrus trees. Jap. J. Appl. Ent. Zool. 23: 246-250.

Porath, A.Z., S. Amitai and E. Swirski. 1974. The spirea aphid *Aphis citricola* Patch, a new aphid in Israel citrus groves. Alon Hanotea 28: 358-362 (in Hebrew).

Santas, L.A. 1980. A list of aphids of Greece and their predators. Biologia Gallo-Hellenica 9: 107-121.

Santorini, A.P. 1977. Aphid species recorded in summer 1976 on various plants in Attica and Korinthia (Greece). Annls Inst. Phytopath. Benaki (N.S.) 11: 310-313.

Zehavi, A. and D. Rosen. 1987. Population trends of the spirea aphid. *Aphis citricola* van der Goot, in a citrus grove in Israel. J. Appl. Entomol. 104: 271-277.

KEY WORDS: *Aphis citricola, Aphis spiraecola,* Green citrus aphid, Citrus aphids, Aphididae

Πρώτη Διαπίστωση του *Aphis citricola* van der Goot σε Εσπεριδοειδή στη Νότια Ελλάδα

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ΠΕΡΙΛΗΨΗ

Η αφίδα *Aphis citricola* van der Goot (= *Aphis spiraecola* Patch), γνωστή ως πράσινη αφίδα των εσπεριδοειδών, παρατηρήθηκε για πρώτη φορά στα εσπεριδοειδή στη χώρα μας. Συγκεκριμένα βρέθηκε σε πορτοκαλεώνα, ποικιλίας Washington navel, στο Νομό Κορινθίας κατά την άνοιξη και το φθινόπωρο του 1986. Επίσης βρέθηκε και σε μανταρινιές, ποικιλίας Κλημεντίνη, την άνοιξη του ιδίου έτους καθώς και σε άλλο πορτοκαλεώνα της ίδιας ποικιλίας με την προαναφερομένη κατά την άνοιξη και το φθινόπωρο του επομένου έτους. Οι αριθμοί ήταν αρκετά μεγάλοι ειδικά στις πορτοκαλιές και φαίνεται από μία πρώτη εκτίμηση ότι, εάν συμβαίνει το ίδιο και σε άλλες περιοχές της χώρας το *A. citricola* ίσως είναι το κυρίαρχο αλλά και το πλέον ζημιογόνο είδος αφίδας στα εσπεριδοειδή στην Ελλάδα, όπως αυτό συμβαίνει και σε άλλες χώρες της λεκάνης της Μεσογείου.