

SHORT COMMUNICATION

New hosts for the pyriform scale *Protopulvinaria pyriformis* (Cockerell) (Hemiptera: Coccidae) in Greece

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The pyriform scale *Protopulvinaria pyriformis* (Cockerell) (Hemiptera: Coccidae), is widely distributed in many countries of the world (Ben-Dov 1993). In the Mediterranean basin, the coccid has been recorded in France (Canard 1996), Israel (Blumberg and Blumberg 1991), Italy (Pellizzari 2003), Portugal (Carvalho and Aguiar 1997) and Spain (Spina 2001). It is a polyphagous insect with more than 100 plant hosts belonging to 34 families (Wysoki 1985).

It was recently recorded for the first time in Greece, on the laurel *Laurus nobilis* L. (Lauraceae) (Ben-Dov et al. 2003) (Fig. 1). Its phenology and ecology was studied in the area of Kalamata (Southern Peloponnesus) on *L. nobilis*, where it was found to complete several overlapping generations every year (Stathas et al. 2009). The duration of generation time was estimated to last ~52 days in nature during winter and it was shortened to 29-33 days during summer. It was found to be parasitized by *Metaphycus helvolus* (Compere) (Hymenoptera: Encyrtidae). However, the scale was able to resist parasitization by encapsulating the parasitoid's eggs. The predator *Chilocorus bipustulatus* (L.) (Coleoptera: Coccinellidae) was found to be the natural enemy of the scale (Stathas, et al. 2008).



FIG. 1. *Protopulvinaria pyriformis* on *Laurus nobilis*.

During the present study a survey was made in the area of Kalamata on 17 plant species belonging to the families Agavaceae, Araliaceae, Cannaceae, Leguminosae, Moraceae, Rubiaceae, Rutaceae and Verbenaceae, in order to record the distribution of *P. pyriformis*

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among other host plants in this area. In June 2007 *P. pyriformis* was found on *Hedera helix* L. (Araliaceae) (Fig. 2a) at the area of Almyros (36°59'58''N, 22°09'18''E) and in May 2008 on *Citrus aurantium* L. (Rutaceae) (Fig. 2b) in the city of Kalamata (37°01'48''N, 22°07'06''E). From the examination of *H.*

helix and *C. aurantium* infested samples in the laboratory, it was found that *P. pyriformis* settles mainly on the lower leaf surface, it is parthenogenetic and oviparous, and produces increased amounts of honeydew throughout the whole year.

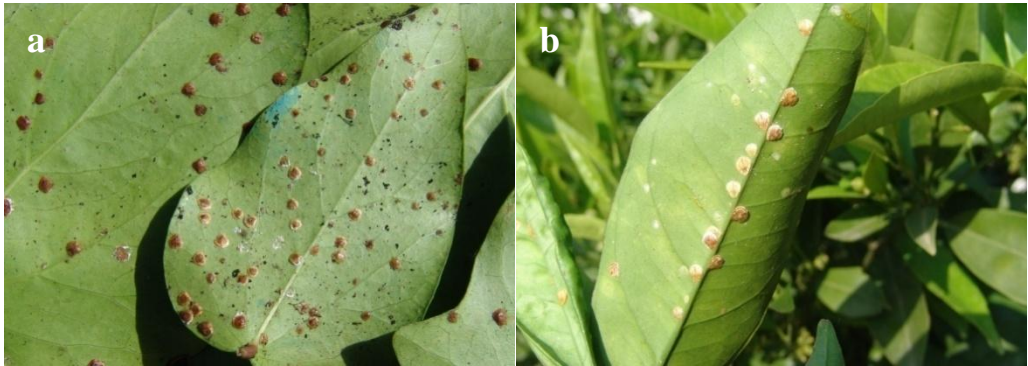


FIG. 2. *Protopulvinaria pyriformis* on *Hedera helix* (a) and *Citrus aurantium* (b).

Protopulvinaria pyriformis could be considered a potential serious pest, as it is reported as an important pest of fruit trees and ornamental plants in many parts of the world (Ben-Dov 1993). The fact that 5 years after the 1st record of the scale (2003) it is found to infest new plant species in the area of Kalamata, indicates that it is important to extend the studies of its biology and ecology. Furthermore, the knowledge of the role and importance of its natural enemies is considered basic in planning an effective program of integrated pest management.

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Νέοι ξενιστές της απιόμορφης ψώρας *Protopulvinaria pyriformis* (Cockerell) (Hemiptera: Coccidae) στην Ελλάδα

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Η απιόμορφη ψώρα *Protopulvinaria pyriformis* (Cockerell) (Hemiptera: Coccidae), καταγράφηκε για πρώτη φορά στην Ελλάδα σε φυτά δάφνης, *Laurus nobilis* στην Καλαμάτα, τον Οκτώβριο του 2003. Αργότερα, τον Ιούνιο του 2006 και τον Απρίλιο του 2007, το *P. pyriformis* βρέθηκε στην ίδια περιοχή να προσβάλλει τα φυτά *Hedera helix* και *Citrus aurantium*. Το κοκκοειδές αυτό έντομο θεωρείται μια εν δυνάμει απειλή για καλλιεργούμενα και καλλωπιστικά φυτά.