

This short description was prepared in the framework of the EU FP7 project DROPSA - Strategies to develop effective, innovative and practical approaches to protect major European fruit crops from pests and pathogens (grant agreement no. 613678). This pest was listed in the DROPSA alert list for orange and mandarin fruit.

Paracoccus marginatus (Hemiptera: Pseudococcidae)

Location of life stages on plant parts: Feeds on leaves, fruit and stem (Walker et al., 2006).

Fruit pathway: yes, not mobile.

Other pathways: plants for planting, cut flowers.

Hosts: Highly polyphagous with more than 55 host plants in over 25 genera, including *Citrus*, *Carica papaya*, *Hibiscus*, *Persea americana*, *Gossypium*, *Solanum lycopersicon*, *Solanum melongena*, *Capsicum*, *Phaseolus*, *Pisum*, *Mangifera indica*, *Prunus* (as cherry), *Punica granatum* (Walker et al., 2006), *Annona squamosa*, *Coffea*, *Gardenia*, *Jatropha curcas*, *Manihot esculenta*, *Plumeria*, *Citrus sinensis*, *Dahlia pinnata*, *Rosa* (CABI CPC).

Distribution: Asia: Bangladesh, Cambodia, India, Indonesia, Malaysia, Maldives, Oman, Philippines, Sri Lanka, Taiwan, Thailand; Africa: Benin, Ghana, Mauritius, Réunion, Tanzania, Togo; North America: Mexico, USA (Florida, Hawaii); Caribbean: Antigua and Barbuda, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Cuba, Dominican Rep., French West Indies, Grenada, Guadeloupe, Haiti, Montserrat, Netherlands Antilles, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Sint Maarten, US Virgin Islands; Central America: Belize, Costa Rica, Guatemala, South America: French Guiana; Oceania: Guam, Northern Mariana Islands, Palau. The pest has extended its range within the Americas, and has been introduced to Asia and Africa (CABI CPC), and is still spreading (Walker et al., 2006).

Damage: *P. marginatus* causes deformation of new growth, leaf yellowing, leaf curl, early fruit drop, fruit covered by the pest and wax secretions (CABI CPC), chlorosis, plant stunting, leaf deformation, early leaf and fruit drop, honeydew, and plant death (Walker et al., 2006). Its importance has recently increased; it causes damage especially on cassava, papaya, hibiscus, annona (CABI CPC), also avocado, citrus, cotton, tomato, eggplant, peppers, beans and peas, sweet potato, mango, cherry, and pomegranate (Walker et al., 2006). On papaya, heavy infestations rendered papaya fruits inedible, and high infestation levels were observed in Rajasthan, India, in many gardens (>80% damage, mat of mealybug on leaves, all leaves damaged, new shoots fully covered with mealybugs, fruit fall and blackening of fruits with full mealybug cover on fruits) (Mani et al., 2012). No specific data were found for Citrus.

Other information: There have been many interceptions in the USA, from many origins (mainly on papaya and hibiscus) (Miller et al., 2014).

Recorded impact: High (on another crop)	Intercepted: Yes	Spreading/invasive: Yes
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References:

- CABI CPC. Crop Protection Compendium. CAB International, UK. <http://www.cabi.org/cpc>
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- Miller D, Rung A, Parikh G, Venable G, Redford AJ, Evans GA, Gill RJ. 2014. *Scale Insects*, Edition 2. USDA APHIS Identification Technology Program (ITP). Fort Collins, CO. <http://idtools.org/id/scales/factsheet.php?name=6986>
- Walker A, Hoy M, Meyerdirk D. 2006. papaya mealybug - *Paracoccus marginatus*. *Featured creatures*. UF/IFAS. University of Florida. http://entomology.ifas.ufl.edu/Creatures/fruit/mealybugs/papaya_mealybug.htm

