

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 lists for orange and mandarin, and for *Vitis* fruits.

***Nipaecoccus viridis* (Hemiptera: Pseudococcidae)**

Fruit pathway: yes, not mobile. often hidden, e.g. under sepals of citrus fruits, and can easily be transported on exported plant commodities (CABI CPC). External feeder on table grapes (APHIS 2013)

Other pathways: plants for planting: can be present on all plant parts, except roots (CABI CPC).

Hosts: Highly polyphagous, hosts incl. *Citrus* (incl. *aurantium*, *reticulata*), *Vitis*, *Mangifera indica*, *Asparagus*, *Chrysanthemum*, *Carica papaya*, *Cucumis*, *Pyrus communis*, *Rosa*, *Solanum*, *Persea americana*, *Gossypium*, *Coffea* (Garcia Morales et al., 2016).

Distribution: *Africa:* Algeria, Angola, Benin, Burkina Faso, Comoros, Cote d'Ivoire, Egypt, Eritrea, Kenya, Madagascar, Malawi, Mali, Mauritius, Niger, Nigeria, Senegal, Seychelles, South Africa, Sudan, Tanzania, Togo, Uganda, Zimbabwe; *Caribbean:* Bahamas; *North America:* Mexico, USA; *Asia:* Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Malaysia, Nepal, Oman, Pakistan, Philippines, Saudi Arabia, Sri Lanka, Taiwan, Thailand, Vietnam; *Oceania:* Australia, Guam, Kiribati, New Caledonia, Northern Mariana Islands, Papua New Guinea, Solomon Islands, Tuvalu (EPPO GD). Found in Florida for the first time in 2009 (Stocks and Hodges, 2010).

Damage: On citrus, feeding on twigs causes deformation. The pest may stunt trees, produces honeydew, and on fruit may cause deformation, discoloration and drop. In India, 5% damage was observed in two vineyards in Bangalore. In Hawaii, it was long considered the most destructive mealybug. On Citrus, losses are mostly due to fruit drop (which may reach 50% for Navel oranges in South Africa) and quality issues due to fruit deformation (CABI CPC citing references from the 1970s). In Southern China on Citrus, it is considered as very widespread and important (Li et al., 1997). It is an agricultural pest in Asia, attacking food, forage, ornamental and fiber crops, and a pest of stored potatoes. It often causes considerable damage (Stocks and Hodges, 2010).

Other information: Intercepted in the USA including on Citrus fruit (Evans and Dooley, 2013; USDA, 2015), and in the Korea Rep. on Citrus (commodity not mentioned) (Suh et al., 2013). The females of this species are flightless (CABI CPC). Individuals often settle in cryptic places on plant material, such as under sepals of citrus fruits, and can easily be distributed on exported plants or plant products (CABI CPC).

Recorded impact: High (uncertain)	Intercepted: Yes	Spreading/invasive: Not known
---	-------------------------	---

References:

- APHIS 2013. Pest Risk Assessment for Table Grapes from China. Animal and Plant Health Inspection Service, United States Department of Agriculture, 119p.
- CABI CPC. Crop Protection Compendium. CAB International, UK. <http://www.cabi.org/cpc>
- EPPO GD. EPPO Global database. <http://gd.eppo.int>
- Evans GA, Dooley JW 2013. Potential Invasive Species of Scale Insects for the USA and Caribbean Basin. J.E. Pena (Ed.), in Potential Invasive Pests of Agricultural Crops, CABI, Wallingford, UK (2013), pp. 320–341.
- García Morales M, Denno BD, Miller DR, Miller GL, Ben-Dov Y, Hardy NB. 2016. ScaleNet: A literature-based model of scale insect biology and systematics. Database. doi: 10.1093/database/bav118. <http://scalenet.info>.
- Li L, Wang R, Waterhouse DF. 1997. The Distribution and Importance of Arthropod Pests and Weeds of Agriculture and Forestry Plantations in Southern China. ACIAR, Canberra, Australia.

- Stocks IC, Hodges G. 2010. *Nipaecoccus viridis* (Newstead), a New Exotic Mealybug in South Florida (Coccoidea: Pseudococcidae). Pest Alert. Florida Department of Agriculture and Consumer Services, Division of Plant Industry
- Suh SJ, Yu HM, Hong K-J. 2013. List of Intercepted Scale Insects at Korean Ports of Entry and Potential Invasive Species of Scale Insects to Korea (Hemiptera: Coccoidea). Korean J. Appl. Entomol. 52(2): 141-160 (2013)
- USDA. 2015. Importation of Citrus spp. from Australia (Citrus Production Areas of Inland Queensland; Western Australia; and Bourke and Narromine, New South Wales) into the Continental United States. Version 4.