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 apple, orange and mandarin fruits.

***Archips argyrospilus* (Lepidoptera: Tortricidae)**

Fruit pathway: larvae feed on young fruit (Government of British Columbia 2015). On *Citrus*, larvae occasionally on newly set or ripening citrus (UC IPM 2013, Capinera, 2008)

Other pathways: plants for planting, cut branches; eggs on branches, larvae also feed on buds, flowers, leaves (Government of British Columbia 2015). On *Citrus*, larvae also feeds on young leaves, flowers (Capinera, 2008)

Hosts: Polyphagous, hosts include *Citrus, Malus domestica, Taxodium distichum* (CABI CPC), *Citrus sinensis, Vitis, Rhododendron, Platanus, Betula papyrifera* (Brown et al., 2008), *Vaccinium* (Retamales and Hancock, 2012), *Pyrus, Prunus, Cydonia, Rubus idaeus, Rubus x loganobaccus, Ribes, Juglans regia, Fraxinus, Acer negundo, Ulmus, Quercus, Populus, Salix, Rosa* (Brunner, 1993).

Distribution: North America: USA, Canada (CABI CPC)

Damage: On various fruit and berry crops (incl. apple, pear etc.), it bores in buds, feeds on petals, flower parts and leaves, webs petals together, rolls and ties leaves together with silk, bores deep irregular holes in small fruit resulting in large russeted scars in mature fruit (Government of British Columbia, 2015). *A. argyrospilus* is rare in commercial orchards in Washington, but a serious problem in some British Columbia orchards (Brunner 1993; Washington State University 2015) On apple damage levels of 20% were observed in the absence of control methods (Deland 1992). In the past, heavy damage was reported both in the USA and Canada, with serious outbreaks mostly on Rosaceae (esp. apple, pear – 40% fruit losses in some cases), but also citrus and complete defoliation of forest trees (from the end of the 1800s to 1960s) (Paradis 1964). Serious but sporadic pest in British Columbia apple orchards (Vakenti *et al.* 1984).

On *Citrus, A. argyrospilus* is considered a minor pest, but it occasionally causes damage in spring by feeding on newly set fruit or on ripening Valencia and Navel oranges, or grapefruit; it may tie leaves to fruit and bore inside fruit providing entry sites for decay organisms, which may lead to fruit drop (UC IPM, 2013). *A. argyrospilus* has been a pest of *Citrus* for many years in (Capinera, 2008)

On *Vaccinium*, larvae feed mostly on foliage but sometimes include green fruit in rolled leaves (Retamales and Hancock, 2012; Brunner, 1993). *A. argyrospilus* is also important as a contaminant of harvested *Vaccinium* fruit (Retamales and Hancock, 2012).

Other information: was intercepted on fresh citrus fruit in New Zealand (Biosecurity New Zealand 2009)

Impact: High (in the past)	**Intercepted:** Yes	**Spreading/invasive:** Not known

References:

Biosecurity New Zealand 2009. Import Risk Analysis: Fresh stonefruit from Idaho, Oregon and Washington. Draft for public consultation. MAF Biosecurity New Zealand.

Brown JW, Robinson G, Powell JA. 2008. Food plant database of the leafrollers of the world (Lepidoptera: Tortricidae) (Version 1.0). http://www.tortricid.net/foodplants.asp.

Brunner JF 1993. Leafrollers - Pandemis leafroller *Pandemis pyrusana* Kearfott, Obliquebanded leafroller *Choristoneura rosaceana* (Harris), Fruittree leafroller Archips argyrospilus (Walker), European leafroller *Archips rosanus* (Linnaeus). Orchard Pest Management Online, Washington State University. http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=48 (accessed August 2015)

CABI CPC. Crop Protection Compendium. CAB International, UK. http://www.cabi.org/cpc
Capinera JL (ed.). 2008. Encyclopedia of entomology. Springer Netherlands
Deland JP 1992. Mating disruption of fruit tree leafroller *Archips argyrospilus* and effects on other leafroller species. MSc thesis. Simon Fraser University. Canada.
Government of British Columbia 2016. Fruittree and European Leafrollers (*Archips argyrospilus*, *Archips rosanus*). URL: http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/animal-and-crops/plant-health/phu-tree-fruit-leafrollers.pdf
Paradis RO 1964. Recherches sur la biologie et la dynamique des populations naturelles *d'Archips argyrospilus* (Wlk.) (Lepidopteres: Tortricidae) dans le sud-ouest du Quebec. PhD thesis. McGill University, Canada.
Retamales JB, Hancock, JF. 2012. Blueberries. CABI, 323 pages.
UC IPM. 2013. Fruit tree Leafroller, Archips argyrospila. Citrus - How to Manage Pests. UC Pest Management Guidelines. University of California Agriculture and Natural Resources. http://www.ipm.ucdavis.edu/PMG/r107301911.html.
Vakenti JM, Campbell CJ, Madsen HF 1984. A strain of fruittree leafroller, *Archips argyrospilus* (Lepidoptera: Tortricidae), tolerant to azinphos-methyl in an apple orchard region of the Okanagan Valley of British Columbia. The Canadian Entomologist 116(1): 69-73.
Washington State University 2015. URL: http://jenny.tfrec.wsu.edu/opm/displaySpecies.php?pn=98