

Mini data sheet on *Naupactus xanthographus* (Coleoptera: Curculionidae)
South American fruit tree weevil

Naupactus xanthographus was added to the EPPO A1 List in 2020. A full datasheet will be prepared, in the meantime you can view here the data which was previously available from the EPPO Alert List (added to the EPPO Alert List in 2018 - deleted in 2020).

Why: *Naupactus xanthographus* (Coleoptera: Curculionidae - South American fruit tree weevil) is a weevil which has been reported to cause economic damage in grapevine and fruit trees. During the EU-funded project DROPSA (Strategies to develop effective, innovative and practical approaches to protect major European fruit crops from pests and pathogens), *N. xanthographus* was identified as a pest of fruit which may present a risk for the EPPO region, in particular for grapevine.

Where: *N. xanthographus* occurs only in South America. It is widespread in Argentina and was introduced into Chile. Limited information is available about its situation in Brazil, Paraguay, and Uruguay.

EPPO region: Absent.

South America: Argentina, Brazil (Rio Grande do Sul, Santa Catarina), Chile (including Easter Island, and Juan Fernandez islands), Paraguay, Uruguay.

On which plants: *N. xanthographus* is a polyphagous weevil which feeds on numerous cultivated plant species and weeds (e.g. *Sorghum halepense*). One of the main native hosts of *N. xanthographus* is *Erythrina crista-galli*, the distribution of the weevil approximately matches the range of this host plant, which has been introduced in Central Chile and Southeastern USA as an ornamental. Its economically important hosts include grapevine (*Vitis vinifera*), and fruit trees such as: apple (*Malus domestica*), stone fruit (*Prunus* spp.), lemon and orange (*Citrus lemon*, *C. sinensis*), pear (*Pyrus communis*), kiwifruit (*Actinidia* spp.) and avocado (*Persea americana*). Other recorded host plants include: *Annona cherimola*, *Diospyros kaki*, *Eriobotrya japonica*, *Glycine max*, *Juglans regia*, *Medicago sativa*, *Mespilus germanica*, *Olea europaea*, *Phaseolus vulgaris*, *Populus nigra*, *Rubus idaeus*, *Solanum lycopersicum*, *Solanum tuberosum*, *Vaccinium* spp.

Damage: direct damage is caused by larvae feeding on roots. Adult feeding causes superficial damage to leaves (irregular leaf margins) and fruit. *N. xanthographus* may also alter fruit quality due to the presence of excrements on fruit. In Chile where it was introduced, *N. xanthographus* is considered to be one of the most important pests of grapevine and of economic importance on stone fruit and citrus.

Adults are dark brown to grey weevils (2 to 2.5 cm long) with greenish yellow bands on the thorax and abdomen. Larvae are white and approximately 1.5 cm long. Adults emerge from the soil over a period of 5-6 months between spring and early autumn. They are most abundant in November and February and live for about 8 months. A generation is completed in 16-21 months. Females are capable of producing offspring in the absence of males for up to 6 months. Eggs are laid in late summer and autumn in the aerial parts of the plants, newly hatched larvae then fall to the ground in search of roots. The insect overwinters as larvae in the soil. Pupation takes place in the soil.

Images of *N. xanthographus* can be viewed on the Internet:

<https://www.invasive.org/browse/subinfo.cfm?sub=4959>

https://commons.wikimedia.org/wiki/File:Naupactus_xanthographus.jpg

<https://www.flickr.com/photos/49679700@N07/5577489568>

<https://gd.eppo.int/taxon/NAUPXA/photos>

Dissemination: Adults are flightless, therefore natural spread is probably limited to short distances. Over long distances, trade of infested plants can spread the pest, as well as movements of infested soil attached to plants or machinery. Adults of *N. xanthographus* may be concealed within bunches of table grapes and have been intercepted on grapes from Chile in the USA and Peru. Interestingly, the peaks of adult emergence in Chile are in September-October and December-February, periods which overlap with the main harvesting season of table grapes. *N. xanthographus* has also been found on apples imported into France from Uruguay.

Pathway: Plants for planting, fruit, soil from countries where the pest occurs.

Possible risks: *N. xanthographus* is a polyphagous pest which can attack many fruit crops that are of economic importance in the EPPO region. It can be noted that *N. xanthographus* is listed as a quarantine pest in Canada, Japan, Jordan, and the USA. In Argentina and Chile, it is considered to be an economically important pest of grapevine and fruit crops. Chemical control of *N. xanthographus* is difficult as its larvae live concealed in the ground. However, barriers placed on the trunk (with insecticides or organically acceptable alternatives formulated in a viscous substrate) can help prevent adult weevils moving from the soil to the foliage. Research on the use of biocontrol agents has also been carried out (e.g. entomopathogenic nematodes). More studies would be needed to evaluate the potential of introduction and establishment of *N. xanthographus* in the EPPO region, but considering its current geographical distribution and interception history, it seems likely that it has the potential to be moved via international trade and that it could establish in the EPPO region.

Sources

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