

Quick scan number: QS-ENT-2012-06

Quick scan date: 17 -01-2013

1

What is the scientific name (if possible up to species level + author, also include (sub)family and order) and English/common name of the organism?
Add picture of organism/damage if available and publication allowed.

Aromia bungii Faldermann, 1834 (2, 5)

Coleoptera, Cerambycidae, Cerambycinae, Callichromatini. (2, 8)

Redneck longhorned beetle, the Plum and Peach longhorn, Red-necked longicorn beetle (4,7,12)

Moschusbockkäfer (6)

Adult male (Foto see www.cerambycoidea.com/foto.asp?id=833)



Larva (Foto by B. Espinosa see www.agricoltura.regione.campania.it/difesa/aromia.html#)



Opened larval gallery

(Foto by B. Espinosa see www.agricoltura.regione.campania.it/difesa/aromia.html#)

2	<p>What prompted this quick scan? <i>Organism detected in produce for import, export, in cultivation, nature, mentioned in publications, e.g. EPPO alert list, etc.</i></p>	<p>Previously, in 2008, an interception of three beetles <i>A. bungii</i> was reported near wooden pallets by the United Kingdom (4). Also, in July 2008, an adult <i>A. bungii</i> was intercepted in a manufacturing plant, importing products from China and Taiwan, located at the port of Seattle (Washington state, USA). In 2010 and 2011 on both occasions an adult was observed in the field in Italy (13). In 2011, the presence of an <i>Aromia bungii</i> adult and galleries was recorded for the first time at one location in Germany. A short PRA study was carried out (6). The pest is currently not listed as a quarantine pest in the EU. The NPPO of Germany and the EPPO Panel on Phytosanitary Measures suggested its addition to the EPPO Alert List in May 2012 (4). In September to November 2012, the presence of <i>Aromia bungii</i> larvae was reported in Italy for the first time on apricot, cherry and plum (11, 13) (See also 1,4,6,11).</p>
3	<p>What is the (most likely) area of distribution?</p>	<p>Asia: widespread in China, Korea, Taiwan, Vietnam. Present as a pest in temperate, continental and subtropical climatic regions (3, 4, 6, 7, 13, 14).</p>
4	<p>Has the organism been detected, sighted and/or has it established itself in nearby countries (DE, BE, LU, FR, UK) <i>Yes/no. If 'yes', provide details.</i></p>	<p>Yes, see question 2.</p>
5	<p>Does the organism cause any kind of plant damage in the current area of distribution and/or does the consignment demonstrate damage suspected to have been caused by this organism? <i>Yes/no + host plants + short explanation of symptoms.</i> <i>Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary pathogen vector, etc.).</i></p>	<p>Larvae of <i>A. bungii</i> bore galleries (17-22 cm long) in the trunk and larger lateral branches, leading to loss of fruit production and weakening of the trees. Exit holes and frass are signs of presence of the pest. Larvae infest the subcortical area beneath the bark and the sapwood (less commonly the heartwood). <i>A. bungii</i> attacks healthy to slightly stressed trees. In China, the main damage is mentioned on <i>Prunus</i> species (Rosaceae), in particular peach (<i>Prunus persica</i>) and apricot (<i>P. armeniaca</i>), and to a lesser extent plum (<i>P. domestica</i>) and cherry (<i>P. avium</i>), Japanese apricot (<i>P. mume</i>) and <i>P. japonica</i>. The following tree species are also reported to be host plants of <i>A. bungii</i> but without any indication of the extent and severity of damage: <i>Azadirachta indica</i> (Meliaceae), <i>Bambusa textilis</i> (Poaceae), <i>Diospyros virginiana</i> (Ebenaceae), <i>Olea europea</i> (Oleaceae) (Olive), <i>Populus alba</i> (Salicaceae), <i>Pterocarya stenoptera</i> (Juglandaceae), <i>Punica granatum</i> (Lythraceae) (Pomegranate), <i>Schima superba</i> (Theaceae) (4,6,7).</p>
6	<p>Indicate the (provisional) probability of establishment of the organism in the Netherlands regarding climate and ecology.</p> <ol style="list-style-type: none"> No risk In greenhouses (low, medium, high risk) Outdoors (low, medium, high risk) Otherwise (e.g. storage facilities, human environment) <p><i>Please illustrate with information/references</i></p>	<p>The pest can likely establish in the Netherlands because host plants (<i>Prunus</i> spp, <i>Populus</i> spp.) are prevalent and the climate is likely suitable for establishment (see Question 3).</p>

7	<p>If the organism would become established in the Netherlands, what kind of damage would it likely cause ?</p> <p><i>Indicate whether damage is expected to be comparable or different to that in area of present distribution : see question 5.</i></p>	<p>It is likely that the damage by larvae of <i>A. bungii</i> in the Netherlands in <i>Prunus</i> species (stone fruit) will be comparable with the damage of an infestation in temperate regions of China (see question 5) (6).</p>
8	<p>Which commercially grown host plants are present and which host plants are present in the natural environment in the Netherlands?</p> <p><i>If establishment is restricted to greenhouse climate, list only host plants in greenhouses.</i></p>	<p><i>Prunus</i> species, <i>Populus</i> species such as <i>P. alba</i>, <i>Pterocarya</i> spp.</p> <p><i>Prunus</i> species are commercially grown for fruit production and nursery stock. Also, <i>Prunus</i> species are present in the natural environment and planted in gardens.</p> <p><i>Populus</i> species are present in the natural environment and trees are planted along roads and canals. Host plants such as apricot, olive, peach and Kaki fruit are produced in the warmer climatic regions in Europe.</p>
9	<p>Provide a provisional estimation of type and probable amount of direct and indirect economic damage (e.g. lower quality, lower production, export restrictions, threat to biodiversity, etc.) likely to occur if the organism would become established?</p>	<p>In China the red-necked longicorn beetle (<i>Aromia bungii</i>) is mainly mentioned as a pest of peaches (30 to 100% damaged trees (12)), and apricots and to a lesser extent of plum and cherry. The larva tunnels in both heartwood of the trunks or larger branches of living trees. Not only stressed and weakened trees are colonized, but also healthy trees. When abundant this species can become a serious pest, greatly weakening trees and killing them. The yield of fruit may be considerably reduced. When <i>A. bungii</i> would become established in the Netherlands it is likely that this Cerambycid will cause economic damage (7,9,10,12,14).</p>
10	<p>What are the possibilities of spreading, either by natural dispersal or human activity?</p>	<p>The life cycle lasts about 2 tot 3 years. Eggs are laid by the females around July and hatch after 8 to 9 days. Larval development takes about 23 tot 35 months and pupation takes 17 to 30 days. . Human activity (movement of infested wooden pallets, wood and plants for planting) contribute to higher risk of spread.</p>
11	<p>In what manner could the organism enter the Netherlands? <i>Mention pathways.</i></p>	<p>Pathway: Plants for planting, wood, wood packaging material from countries where <i>A. bungii</i> occurs (4).</p>
12	<p>Has the organism been detected on/in a product (cut flowers, fruit...) destined for the consumer market?</p> <p><i>If "no", please go to question 14</i></p>	<p>No.</p>
13	<p>If the organism has been found on/in a consumer product, are there any risks of introduction and establishment in crop areas and/or natural environment in the Netherlands?</p>	<p>Not relevant</p>

14	Additional remarks	An Express-PRA has been carried out in Germany and it was concluded that this pest has the potential to establish in most parts of the Eppo region and probably presents a high risk (6). <i>Aromia moschata</i> "Muskusboktor" is the only species of the <i>Aromia</i> genus present in the Netherlands. It has a generation time of about three years and colonizes weakened <i>Salix</i> , <i>Populus</i> and <i>Alnus</i> trees (16). Adults are observed from May to September with a peak in July and August. When disturbed <i>A. moschata</i> adults spread a specific musk-like scent. Also <i>A. bungii</i> adults use scent to deter enemies.
15	References: sites consultancy: 3/6 -12-2012	<ol style="list-style-type: none"> 1. http://www.agricoltura.regione.campania.it/difesa/aromia.html# 2. http://www.biolib.cz/en/taxon/id11051/ 3. http://www.cerambycoidea.com/foto.asp?id=833 4. http://www.eppo.int/QUARANTINE/Alert_List/insects/Aromia_bungii.htm 5. http://www.naris.go.kr/v2/naris_search/search_result_detail.jsp?inst_id=1154675 6. http://pflanzengesundheit.jki.bund.de/dokumente/upload/0ec1b_aromia_bungii-ex-pra.pdf 7. Duffy, E.A.J., 1968, A monograph of the immature stages of oriental timber beetles (Cerambycidae). 8. Cherepanov, A.I., 1990, Cerambycidae of Northern Asia, Vol 1-6 9. Nian-feng, W., et al., 2011, Effects of ground cover on the niches of main insect pests and their natural enemies in peach orchard, Shengtaixue Zazhi, 30 (1), 30-39. 10. Na, H., ShaoBin, Y., 2010, Biological control of <i>Aromia bungii</i> by <i>Lepiota helveola</i> spent culture broth and culture homogenates, Acta Edulis Fungi, 17 (4), 67-69. 11. PFC Reporting Service 2012/204, First report of <i>Aromia bungii</i> in Italy. 12. Liu Qizhi et al., 1997. A study on the application of entomopathogenic nematodes for controlling larvae of Red-necked Longicorn beetle. <i>Acta Agriculturae Boreali-Sinica</i> 12(1):97-101. 13. Garonne, A.P., 2012. <i>Aromia bungii</i> un nuovo fitofago della Drupacee in Campania. Seminario-workshop Nuovi pericolosi insetti di recente introduzione in Campania. 27 Novembre 2012. on http://www.agricoltura.regione.campania.it/difesa/aromia.html 14. Wu Junxiang & Li Yiping, 2005. Chapter 14. Branch borers. (PPT presentation) Teaching syllabus of Northwest A&F University, A&F University, Yangling, Shaanxi province, China on http://210.27.80.89/2005/nongyekongchun/page/Agricultural%20Entomology%20(PDF)/Chapter%2014%20%20Branch%20borers.pdf 15. MA Wen-hui et al., 2007. Study on the Occurrence and Life History in <i>Aromia bungii</i> (Faldermann). Acta Agriculturae Boreali-Sinica, 2007-52 abstract on http://en.cnki.com.cn/Article_en/CJFDTOTAL-HBNB2007S2059.htm 16. Teunissen, A.P.J.A. 2009. Verspreidingsatlas Nederlandse boktorren (Cerambycidae). - EIS-Nederland, Leiden.
16	Conclusions	<i>Aromia bungii</i> is a longhorned beetle which is present in different countries in eastern Asia. In recent years, the pest has also locally been found in Europe (Germany, Italy). <i>A. bungii</i> can attack tree species from different plant families but it is especially known as a pest of <i>Prunus</i> spp. It can very likely establish in the Netherlands. When the pest would become established in the Netherlands, it can especially damage <i>Prunus</i> spp. and <i>Populus</i> spp. in tree nurseries, orchards (cherry and plum) and in public and private areas. There is a risk that it extends its host range considering the wide range of host plant species reported. However, the extent of the expected damage is uncertain

		<p>because of the limited information available about the pest and uncertainty about the pest's behaviour outside its native range. The pest has for example mainly been reported as a pest of peach and apricot trees (which are not grown in the Netherlands) and it is uncertain to which extent plum and cherry orchards in the Netherlands are endangered. Potential pathways are wood including wood packaging material (WPM) and plants for planting of host species. Plants for planting of <i>Prunus</i> spp. (if dormant) and <i>Populus</i> spp. may be imported from countries where the pest is present without any specific restrictions. WPM should be treated according to international standards (ISPM 15) but there have been several interceptions and findings of pest related to import of WPM in Europe in recent years.</p>
17	<p style="text-align: center;">Follow-up measures</p>	<p>During import inspections of host plants of <i>Aromia bungii</i> especially <i>Prunus</i> and <i>Populus</i> spp. from eastern Asia particular attention will be paid to possible presence of the pest.</p> <p>Tree nurseries which import trees and shrubs will be included in the survey program of the NPPO.</p> <p>Wood packaging material (WPM) should have been treated according to international standards (ISPM15). The NPPO already conduct surveys to check if WPM originating in China has been properly treated.</p> <p>In case of a finding of <i>A. bungii</i> in the Netherlands, phytosanitary measures will be considered for eradication.</p>