

## Quick scan number: QS. nem.2012.02

Quick scan date: 11 September 2012		
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? <i>Add picture of organism/damage if available and publication allowed.</i>	<i>Bursaphelenchus fungivorus</i> Franklin & Hooper, 1963.
2	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>	This nematode was recently detected in several samples from pine wood bark imported from Portugal. Unlike the closely related species <i>Bursaphelenchus xylophilus</i> , <i>B. fungivorus</i> is not a harmful nematode for coniferous trees. All coniferous wood and bark from Portugal should be heat treated in order to eliminate potential <i>B. xylophilus</i> (Commission Decision 2006/133/EC). The presence of <i>B. fungivorus</i> indicates that the treatment of the bark lot was not effective. Some beetles within the family Curculionidae and Cerambycidae (including Monochamus) are vectors of <i>Bursaphelenchus</i> spp. The beetles are attracted via scents to the dead or stressed trees and pheromones of other beetles looking for the same diseased trees play a role as well. While <i>B. xylophilus</i> can behave as a typical xylophagous species, <i>B. fungivorus</i> exclusively feeds on fungi in wood and bark. <i>B. fungivorus</i> has been reported from coniferous wood, fibre/chips and bark material. The latter has also been found on xylophagous and fungi feeding Curculionidae. <i>Bursaphelenchus</i> species are in general transported by beetles from infested trees to healthy trees. It is most likely that this bark material was infested with <i>B. fungivorus</i> at the place of origin (Portugal). <i>B. fungivorus</i> has so far not been detected in the Netherlands.
3	What is the (most likely) area of distribution?	<i>B. fungivorus</i> is a nematode common to Europe (also present in Portugal) and recently detected in Russia, Brazil and China. The area of distribution of <i>B. fungivorus</i> however is not relevant. The closely related nematode of concern, <i>B. xylophilus</i> , is in Europe present in various areas in Portugal and was found incidentally in Spain. Several measures are taken to prevent the spread of this harmful <i>B. xylophilus</i> to other European countries.
4	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. No interceptions</i>	Not relevant for <i>B. fungivorus</i> .

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. Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary pathogen vector, etc.).</i></p>	<p><i>Bursaphelenchus fungivorus</i> was originally described from rotting <i>Gardenia</i> buds infested with the fungi <i>Botrytis cinerae</i> found in a greenhouse in the UK. The origin of <i>B. fungivorus</i> was unknown at that time (Franklin &amp; Hooper, 1963). <i>B. fungivorus</i> has been isolated in large numbers from growing media (containing coniferous bark) from an European greenhouse (Braasch et al, 2002). Although <i>B. fungivorus</i> lives in wood and bark, like most other <i>Bursaphelenchus</i> species, it is the only known <i>Bursaphelenchus</i> species that can live in plant growing media for a long period of time, feeding on fungi.</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"> <li>No risk</li> <li>In greenhouses (low, medium, high risk)</li> <li>Outdoors (low, medium, high risk)</li> <li>Otherwise (e.g. storage facilities, human environment)</li> </ol> <p><i>Please illustrate with information/references</i></p>	<p>Not relevant for <i>B. fungivorus</i>.</p>
7	<p>If the organism would become established in the Netherlands, what kind of damage would it likely cause? <i>Indicate whether damage is expected to be comparable or different to that in area of present distribution : see question 5.</i></p>	<p>Not relevant for <i>B. fungivorus</i>.</p>
8	<p>Which commercially grown host plants are present and which host plants are present in the natural environment in the Netherlands?  <i>If establishment is restricted to greenhouse climate, list only host plants in greenhouses.</i></p>	<p>Not relevant for <i>B. fungivorus</i>.</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>Not relevant for <i>B. fungivorus</i>.</p>
10		<p>Not relevant for <i>B. fungivorus</i>.</p>

	What are the possibilities of spreading, either by natural dispersal or human activity?	
11	In what manner could the organism enter the Netherlands? <i>Mention pathways.</i>	Not relevant for <i>B. fungivorus</i> .
12	Has the organism been detected on/in a product (cut flowers, fruit...) destined for the consumer market? <i>If "no", please go to question 14</i>	<i>B. fungivorus</i> was found in a bark lot. Bark is used as a growing medium for e.g. Orchids.
13	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?	Not relevant for <i>B. fungivorus</i> .
14	Additional remarks	
15	References:	<ol style="list-style-type: none"> <li>1. Braasch, H., Beenewitz, A. &amp; W. Hantusch (2002). <i>Bursaphelenchus fungivorus</i>-a nematode of the wood nematode group in growing substrate of a greenhouse and in important wood and bark. Nachrichtenblatt des Deutschen Pflanzenschutzdienstes. 54 (1), 1-4.</li> <li>2. Braasch, H., Burgermeister, W. &amp; J. Gu (2009). Revised intra-generic grouping of <i>Bursaphelenchus</i> (Fuchs, 1937) (Nematoda: Aphelenchoidea). J. Nematode Morphol.Syst. 12 (1), 65-88.</li> <li>3. Hunt, D.J. (1993). Aphelenchida, Longidoridae and Trichodoridae: their systematics and bionomics. CABI, Wallingford, UK. 352pp.</li> <li>4. Ryss, A., Vieira, P., Mota, M. &amp; O. Kulinich (2005). A synopsis of the genus <i>Bursaphelenchus</i> Fuchs, 1937 (Aphelenchida: Parasitaphelenchidae) with keys to species. Nematology 7 (3), 393-458.</li> <li>5. Schönfeld, U, Braasch, H. &amp; W. Burgermeister (2006). <i>Bursaphelenchus</i> spp. (Nematoda: Parasitaphelenchidae) in wood chips from sawmills in Brandenburg and description of <i>Bursaphelenchus willibaldi</i> sp. n. Russian Journal of Nematology</li> </ol>

16	<b>Conclusions</b>	All bark from Portugal should be heat treated in order to eliminate possible <i>B. xylophilus</i> (Commission Decision 2006/133/EC). The finding of <i>B. fungivorus</i> in bark originating from Portugal indicates that the treatment of the bark lot had not (sufficiently) been effective.
17	<b>Follow-up measures</b>	All bark lots originating from the Portuguese company which had treated the bark in which the <i>Bursaphelenchus</i> species was found will be sampled and tested at import for <i>Bursaphelenchus</i> spp. Infested lots will have to be treated, sent back or destroyed.