



National Plant Protection Organization, the Netherlands

Quick scan number: **QS. Myc 417**

Quick scan date: 17th April 2014		
1	<p>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></p>	<p><i>Cryptostroma corticale</i> (Ellis & Everh.) P.H.Greg. & S. Waller syn. <i>Coniosporium corticale</i> Ellis & Everh.; Fungi, Ascomycota, Cryptostroma; Sooty bark disease</p>  <p>Symptoms pictures © Crown Copyright Forestry Commission</p>
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>First record of the disease caused by this organism in the Netherlands.</p>
3	<p>What is the (most likely) area of distribution?</p>	<p>North America (United States and Canada), Europe (UK, Germany, France, Norway and Italy) (8)</p>
4	<p>Has the organism been detected, sighted and/or has it established itself in nearby countries (DE, BE, LU, FR, UK) Yes/no. <i>If 'yes', provide details. No interceptions</i></p>	<p>Yes, the organism is known to occur in the UK at least since 1945 (1). The disease has established in Germany (6) at different locations and has been found in France (8).</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>Yes, this fungus is the causal agent of sooty bark disease in sycamore (<i>Acer pseudoplatanus</i>). Other <i>Acer</i> spp., such as <i>A. campestre</i> (field maple), <i>A. platanoides</i> (Norway maple) and <i>A. saccharum</i> (silver maple), can also be damaged. Additional hosts are <i>Tilia</i> spp. (basswood), <i>Betula</i> (birch) and <i>Carya alba</i> (hickory) (3,4). The organism seems to be an opportunistic parasite, that causes most damage after hot and dry summers. Infected trees usually show a succession of symptoms before death (wilting, dieback, stain, blister and bark-shedding). Under the bark of affected trees, a dark spore mass is formed. Inhalation of large quantities of spores can lead to an lung disease in humans, known as extrinsic allergic alveolitis (9).</p>
6	<p>Indicate the (provisional) probability of establishment of the organism in the Netherlands regarding climate and ecology. a. In greenhouses (low, medium, high) b. Outdoors (low, medium, high) c. Otherwise (e.g. storage facilities, human environment) <i>Please illustrate with information/references</i></p>	<p>Considering the fact that the disease has established in the UK and Germany and that <i>Acer</i> spp. are widely planted outdoors in NL, the probability of establishment is rated as high.</p>
7	<p>What are the host plants? Which host plants are commercially grown in the Netherlands and which are present in the natural environment? <i>If establishment is restricted to greenhouse climate, list only host plants in greenhouses.</i></p>	<p><i>Acer</i> spp are the most important hosts. The disease is also sporadically mentioned from <i>Tilia</i>, <i>Betula</i> and <i>Carya alba</i>. These trees are present in the natural environment, and also commercially grown.</p>
8	<p>Provide a provisional estimation of type and 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>Tree death as a result of this disease, is expected to occur only occasionally. Serious damage is only to be expected after hot and dry summers, otherwise, the fungus remains quiescent, and can only be found in dying small branches in the crown of trees.</p>
9	<p>How rapid is the organism expected to spread after introduction (by natural dispersal and human activity)?</p>	<p>Infection occurs through airborne conidia entering through wounds and broken ends of branches. The conidia are formed abundantly in affected trees and the fungus may spread rapidly. The possible role that squirrels may play as vector needs further examination (5)</p>
10	<p>In what manner could the organism enter the Netherlands? <i>Mention pathways.</i></p>	<p>Transmission is normally by air-borne conidia. The organism could enter via plants for planting or with dead wood, sawn timber and pulp of sycamore (4). The exact role of a possible vector is not clear. The organism is already present. Origin unknown.</p>
11	<p>Has the organism been detected on/in a product (cut flowers, fruit, ...) destined for the consumer market? <i>If "no", please go to question 13</i></p>	<p>No</p>

12	<p>If the organism has been found on/in product other than plants for planting (e.g. cut flowers, fruit, vegetables), are there any risks of introduction and establishment in crop areas and/or natural environment in the Netherlands? <i>Only to be answered in case of an interception and/or a find.</i></p>	<p>No, it was found in fire wood, from a tree that was cut down last year in the province Noord Holland.</p>
13	<p>Additional remarks</p>	
14	<p>References</p>	<ol style="list-style-type: none"> 1. <i>Cryptostroma corticale</i> and sooty bark disease of sycamore (<i>Acer pseudoplatanus</i>), P.H. Gregory and S. Waller, Trans. Brit. Myc. Soc. 1951 vol.34 p 579- 597. 2. Population structure of <i>Cryptostroma corticale</i>, the causal fungus of sooty bark disease of Sycamore, G.P. Bevercombe and A.D.M. Rayner. Plant Pathology (1984) 33, 211-217. 3. Crop Protection Compendium – <i>Cryptostroma corticale</i>. 4. CMI Description of Pathogenic Fungi and Bacteria , 1977, 54, Sheet 539 5. Sooty bark disease of sycamore and the grey squirrel, H.J. Abbott, G.P. Bevercombe and A.D.M. Rayner, Trans. Brit. Myc. Soc. 1977 vol.69 p 507- 508. 6. Increased incidence of fungal diseases on sycamore in North-West Germany, G. Langer, U. Bressemer and M. Habermann, AFZ/ Der Wald, Allgemeine Forst Zeitschrift für Waldwirtschaft und Umweltvorsorge, 2013, 68, 6, 22-26. 7. Forest health and forest protection 2007 in Germany, A. Wulf and H. Schumacher, Forst und Holz, 2008, 63, 1 24-28. 8. http://nt.ars-grin.gov/fungalDATABASES/new_allView.cfm?whichone=all&thisName=Cryptostroma%20corticale&rganismtype=Fungus&fromAllCount=yes 9. Extrinsic allergic alveolitis (EAA), folder Erasmus MC, Rotterdam. http://www.erasmusmc.nl/longziekten/patientenzorg/3450318/3450905/ (last accessed 12th March 2014).
15	<p>Conclusions</p>	<p>First record of the fungus <i>Cryptostroma corticale</i> in the Netherlands. <i>C. corticale</i> is the causal agent of sooty bark disease in sycamore (<i>Acer pseudoplatanus</i>). Other <i>Acer</i> spp., such as <i>A. campestre</i> (field maple), <i>A. platanoides</i> (Norway maple) and <i>A. saccharum</i> (silver maple), can also be damaged. It is generally a minor pathogen and significant damage is only expected after dry and hot summers.</p>
16	<p>Follow-up measures</p>	<p>No statutory action. The fungus is present in the EU including nearby countries and is naturally transmitted by airborne spores.</p>