

## DISEASE NOTE

**DETECTION OF THE WOOD DECAY  
ASCOMYCETE *KRETZSCHMARIA DEUSTA*  
IN URBAN MAPLE TREES  
IN ITALY**

S. Michelotti, F. Guglielmo and P. Gonthier

*Department of Exploitation and Protection  
of the Agricultural and Forestry  
Resources, Plant Pathology, University of Torino,  
Via L. da Vinci 44, 10095 Grugliasco (TO), Italy*

In June 2008, a basal stem failure of a sycamore maple tree (*Acer pseudoplatanus*) occurred in Turin (Italy). The failed tree did not show any external signs of fungal disease. However, the wood at the point of stem breakage was decayed and permeated by black lines. Isolations from decayed wood samples, performed on potato dextrose agar (PDA), yielded white fungal colonies that later turned greyish-brown producing hyaline, smooth and ovate conidia (5.5-7×2.5-3.5 µm) on tufts of sparsely branched conidiophores. Using a multiplex PCR assay (Nicolotti *et al.*, 2009), the fungal cultures were identified as *Kretzschmaria deusta*. The features of the decayed wood and the morphological traits of pure cultures were also consistent with this diagnosis. After this finding, 77 maple trees, comprising those adjacent to the failed tree, were surveyed and sampled using the drilling method by Guglielmo *et al.* (2010). Although no overt signs of *K. deusta* infection were observed, multiplex PCR identified this fungus in five trees, comprising four sycamore maples and a Norway maple (*Acer platanoides*). Three of these infected trees were very close to the failed one, thus suggesting a clustering of infection. Incidence of *K. deusta* was higher than that of other wood decay fungi detected by multiplex PCR. Although *K. deusta* is known as a threat for the stability of different broadleaf trees in the urban context of northern and central Europe, to our knowledge this is the first report of this pathogen in urban maple trees in Italy.

Guglielmo F., Gonthier P., Garbelotto M., Nicolotti G., 2010. Sampling optimization for DNA-based diagnosis of wood decay fungi in standing trees. *Letters in Applied Microbiology* **51**: 90-97.

Nicolotti G., Gonthier P., Guglielmo F., Garbelotto M., 2009. A biomolecular method for the detection of wood decay fungi: a focus on tree stability assessment. *Arboriculture & Urban Forestry* **35**: 14-19.

*Corresponding author:* P. Gonthier  
Fax: +39.011.2368697  
E-mail: paolo.gonthier@unito.it

Received April 3, 2012  
Accepted April 13, 2012

## DISEASE NOTE

**FIRST REPORT OF *PECTOBACTERIUM  
CAROTOVORUM* subsp. *CAROTOVORUM*  
CAUSING STEM ROT ON GREENHOUSE  
TOMATOES IN SYRIA**

A. Al Ghazzawi<sup>1</sup>, M. Abu Ghoura<sup>2</sup>, N. Al Beig<sup>1</sup>,  
A. Jaloul<sup>2</sup> and J. Mando<sup>1</sup>

<sup>1</sup>*General Commission for Scientific Agricultural Research,  
P.O. Box 113, Douma, Syria*

<sup>2</sup>*Department of Plant Protection, Faculty of Agriculture,  
University of Damascus, Damascus, Syria*

During winter 2010 and 2011, stem rot symptoms were seen on greenhouse-grown tomato (*Lycopersicon esculentum*) plants in Tartous governorate (Syria). Affected plants showed darkening and water soaking of the stem and vascular browning, followed by wilting and death. These symptoms were similar to those reported from Tunisia by Hibar *et al.* (2007). Bacteria isolated on King's medium B (KB) from rotting stems, formed round, slightly convex, white- to cream-coloured colonies. Twelve isolates were Gram-negative, not fluorescent on KB, facultative anaerobic in Hugh and Leifson medium, negative for levan production, oxidase, arginine dihydrolase, acid from malonate and utilization of keto-methyl glucoside and catalase-positive and induced hypersensitive reaction on tobacco and soft rot of potato slices. Acid was produced from trehalose, sucrose, arabinose, raffinose, but not form arabitol, sorbitol and maltose. These tests indicated the presence of *P. carotovorum* subsp. *carotovorum* (*Pcc*), whose identity was confirmed by PCR, using the *Pcc*-specific primer pair Y1: 5'-TTACCGGACGCCGAGCTGTGGCGT-3' and Y2: 5'-CAGGAAGATGTCGTT ATCGCGAGT-3' (Helias *et al.*, 1998). Pathogenicity tests consisted in needle puncture inoculation of tomato seedling stems with bacteria suspension in distilled water (10<sup>8</sup> CFU/ml) whereas controls were injected with sterile distilled water. All plants were covered with polyethylene bags for 24 h and placed in a climatic chamber at 25°C, 80% RH and a 12 h photoperiod. After three to seven days, all inoculated plants, but not controls, showed darkening and water-soaking of the stem and vascular browning. Some plants died within three days. To our knowledge this is the first record of the occurrence of soft rot, caused by *Pcc* on greenhouse tomatoes in Syria.

The authors would like to thank Mrs. M. Shaaban, M. Shabani and M. Shlaha for their assistance.

Helias V., Le Roux A.C., Bertheau Y., Andrivon D., Gauthier J.P., Jouan B., 1998. Characterization of *Erwinia carotovora* subspecies and detection of *Erwinia carotovora* subsp. *atroseptica* in potato plants, soil and water extracts with PCR-based methods. *European Journal of Plant Pathology* **104**: 685-699.

Hibar K., Daami-Remadi M., El Mahjoub M., 2007. First report of *Pectobacterium carotovorum* subsp. *carotovorum* on tomato plants in Tunisia. *Tunisian Journal of Plant Protection* **2**: 1-5.

*Corresponding author:* A. Al Ghazzawi  
Fax: +963.11.57386312  
E-mail: Ghazawi11@gmail.com

Received March 16, 2012  
Accepted April 28, 2012