



First reports of *Cryptostroma corticale* causing sooty bark disease in *Acer* sp. in Canton Geneva, Switzerland

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In June 2014, characteristic symptoms of sooty bark disease were observed on the trunk of an approximately 40-year-old maple tree in Canton Geneva, Switzerland. Five other nearby maple trees of identical age displayed similar symptoms on several branches but not on the trunk. Symptoms consisted of bark blistering and shedding, with long and broad black stripes, resulting in thick layers of fungal spores forming blackish stains under the bark (Fig. 1). Samples were taken from the dark stains and by coring into the trunk with an increment borer at 1.5 m height. Samples were seeded onto potato glucose agar (PGA) with ampicillin, from which pure fungal cultures were isolated and DNA extracted according to Lefort & Douglas (1999). Subsequent PCR amplifications targeted the rDNA ITS region using the primer pair ITS4/ITS5 (White *et al.*, 1991). DNA sequences were registered in the Nucleotide NCBI database (GenBank Accession Nos. KP114070-KP114098) and BLAST comparison provided a genetic identification for each isolate.

The core cut in 16 equal pieces, 1 cm long, yielded 16 isolates of *Cryptostroma corticale* only. Bark yielded 53 isolates from 30 samples that resolved into 20 different fungal species (Fig. 2). *Cryptostroma corticale* amounted to 23% of total isolates while the yield of *Cytospora chrysosperma*, a common canker agent of *Populus* spp. was 15% of total isolates. Plant pathogens often observed in decaying trees, such as *Dothiorella iberica*, *Mucor* spp., *Phomopsis* spp. and *Fusarium* sp. yielded another 25% altogether. *Cryptostroma corticale* was present in symptomatic bark and was the only microorganism retrieved from cores taken from the internal wood. After felling the tree, its cross section displayed an irregular yellow brown stain, with greenish margins, as often observed in diebacks caused by *C. corticale* (Fig. 3). This fungus is not only known as a pathogen of *Acer* spp., *Tillia* spp and *Betula* spp., but also as the agent of Maple bark stripper's disease, a hypersensitivity pneumonitis, caused by its hyper

allergenic spores (Emmanuel *et al.*, 1966). This pathogen is considered established in the UK, France and Germany and was recently found in the Netherlands (Anonymous, 2014). This is the first report of an isolated and identified strain in Switzerland. This strain, labelled as UASWS1256 in our collection, has been deposited in the collection DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen (Braunschweig, Germany) under the reference number DSM 100040.

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Figure 1

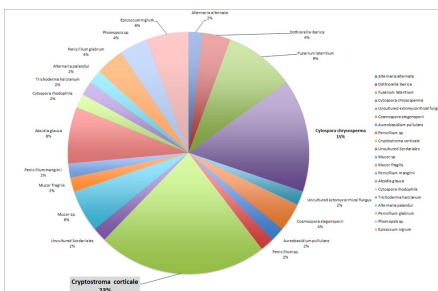


Figure 2



Figure 3

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