

## Mycosphaerella dearnessii occurs in Slovenia

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One-year-old needles of Scots pine (*Pinus sylvestris*) and stone pine (*P. mugo*) growing in parks in Bled and Ljubljana, Slovenia, were found dead or blighted in 2008 and 2009. A total of 15 trees had damage ranging from scattered twigs with affected needles to more extensive browning in the crown. All affected trees were removed and destroyed. When needles were placed in damp conditions, light yellow-brown to olive-green conidial slime was produced in short cirrhi from raised black areas with slits on both sides of the needles. The black areas (conidiomata) contained light brown conidia, straight or curved, with a rounded apex and truncate base, thick and verrucose wall, and 0–6 septa. In water, they measured 30 (16–42) × 4 (2–5) µm. Mycelia arising from sterilized pieces of brown needles formed slow growing colonies on malt extract agar, quickly covered with a slimy mass of conidia. The characteristics of this fungus correspond to the *Lecanosticta acicola* anamorph of *Mycosphaerella dearnessii*, the cause of brown-spot needle blight (Anonymous, 2005). Samples of the diseased needles and pure cultures of the fungus were deposited in the Herbarium of the Slovenian Forestry Institute (Nos. 1666–1668).

A spore suspension of the fungus in distilled water ( $67 \times 10^3$  spores per mL) was sprayed on needles of 12 shoots of three stone pines and the shoots enclosed in polyethylene bags for two days in June 2009. All treated plants were held in secure phytosanitary conditions. After two weeks, small yellow discolourations began to appear on the inoculated

needles, turning brown after eleven weeks. *Lecanosticta acicola* was reisolated in October 2009 from brown spots, on which stromata appeared. The needles of the control shoots sprayed with distilled water were undamaged. This is the first report of *M. dearnessii* in Slovenia. Brown spot needle blight was earlier reported throughout the Alpine region by Holdenrieder & Sieber (1995). More recently it has spread to the Czech Republic (Jankovský *et al.*, 2009).

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## First report of *Colletotrichum acutatum* and *C. gloeosporioides* causing anthracnose diseases on strawberry in Egypt

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During the growing seasons of 2007 and 2008, typical anthracnose symptoms were observed in cultivated strawberry (*Fragaria × ananassa*) fields in Kalubia and Ismailia governorates, Egypt. Disease symptoms on immature and ripe fruits contained circular, sunken, and dark-coloured lesions (1–12 mm) bearing salmon-coloured masses of conidia, with lesions also appearing in necrotic petioles and stolons (Freeman & Katan, 1997). A representative *Colletotrichum acutatum* culture (isolate 4), from infected fruit (cv. Yael), possessed hyaline, cylindrical conidia attenuated at both ends, measuring 12.6 (11.8–15.4) × 4.1 (3.3–5.1) µm (Gunnell & Gubler, 1992). Additional symptoms of wilted plants resembled those of anthracnose crown rot caused by *C. gloeosporioides* (Freeman *et al.*, 2002). A representative *C. gloeosporioides* culture (isolate 1), isolated from necrotic roots (cv. Tamar), possessed hyaline, oblong conidia with obtuse ends, measuring 15.5 (14.3–17.3) × 4.5 (4.3–5.0) µm (Gunnell & Gubler, 1992).

Symptoms typical to those observed in the field were obtained 3 weeks after inoculation on 2-month-old potted strawberry transplants (six replicate plants each for isolate 1 and isolate 4), sprayed with conidial suspensions ( $10^6$  conidia per mL) and maintained in a moist chamber for 48 h at 25°C. Water-inoculated plants remained healthy. Re-isolations were made from infected fruit, petioles, stolons and crowns, verifying the causal agents of disease.

Species-specific PCR amplification was conducted on the two representative *Colletotrichum* isolates. The identities of the pathogens were confirmed as *C. gloeosporioides* (isolate 1) resulting in a single amplified DNA fragment of 450 bp using primers ITS4 and CgInt; and *C. acutatum*

(isolate 4) with an amplified product of 490 bp using primers ITS4 and CaInt2 (Freeman *et al.*, 2002). This is the first reliable and accurate report, based on molecular identification, of *C. acutatum* and *C. gloeosporioides* causing anthracnose on strawberry in Egypt, although a record on occurrence of strawberry anthracnose was published previously in a local journal (Khafagi, 2006).

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