



First report of box blight caused by *Cylindrocladium buxicola* in Georgia

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Buxus colchica is a relict species of box of the Black Sea coast of Georgia. The main growing area of *B. colchica* is located in the Mtirala National Park (Kobuleti region, Ajara, Western Georgia). In November 2010, symptoms of dark brown spots on leaves, narrow blackish streaks on the stems and defoliation were observed on box plants (*B. colchica*). Severe blight symptoms were found on 70% of the box plants in this locality (Fig. 1). The symptoms we observed were similar to box blight, caused by *Cylindrocladium buxicola*, reported in Croatia, Spain, Italy, Germany, Belgium and the United Kingdom (Henricot *et al.*, 2000; Brand, 2005; Crepel & Inghelbrecht, 2003; Saracchi *et al.*, 2008; Pintos *et al.*, 2009; Cech *et al.*, 2010).

To induce sporulation, diseased leaves and stem pieces were incubated in a moist chamber at 22°C. After five days of incubation, the fruiting bodies of the fungus developed (Fig. 2). Conidiophores growing on the surface of the box leaves and stem parts were examined under the microscope. Cylindrical, hyaline conidia, 52-65 x 4-6 µm in size, rounded at both ends, with one septum were observed. Conidia were produced on conidiophores with penicillate arrangement. Conidia were transferred onto potato dextrose agar medium. Colonies grew slowly and after two weeks incubation at 24°C reached 3.5 cm in diameter. The colony reverse was brown in the centre surrounded by a creamy mycelial growth. The colony surface was covered by aerial cottony mycelium (Fig. 3). Pathogenicity tests were conducted on four-year-old plants of *B. colchica*. Whole plants were inoculated by spraying a spore suspension of the fungus (1x10 conidia/ml). Inoculated plants were incubated at 25°C and 100% humidity in a moist chamber in the laboratory. Some plants were sprayed with sterile water as a control. Three days after inoculation, the first lesions appeared. All inoculated plants showed blight symptoms on leaves and stems within two weeks, which were identical to those previously described (Fig. 4). Control plants remained unaffected. The pathogen was re-isolated from lesions thereby completing Koch's postulates. Based on the morphological and cultural characters, the pathogen isolated from *B. colchica* was identified as *Cylindrocladium buxicola*. To our knowledge,

this is the first report on the presence of *C. buxicola* on *B. colchica* in Georgia.

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Figure 1



Figure 2



Figure 3



Figure 4

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