Diseases Caused by Fungi and Fungus-Like Organisms

First Report of Botrytis Blight Caused by *Botrytis cinerea* on *Plectranthus scutellarioides* in Italy

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Plectranthus scutellarioides (syn. *Solenostemon scutellarioides*), Lamiaceae family, is an herbaceous perennial bedding plant appreciated for its colorful, variegated leaves. In March 2023, symptoms of an unknown blight were observed on ten 5-month-old potted plants of *P. scutellarioides* grown in a glasshouse belonging to the Agroinnova Centre in Grugliasco (Torino province, Northern Italy). Symptoms appeared at the base of stems in which infected tissues rotted and turned brown. Affected leaves and petioles wilted and fell off. In some cases, the plant broke at the base and collapsed. A soft, gray mycelium appeared on affected tissues. Five affected stems were immersed in a solution of sodium hypochlorite (1%) for 30 s, and then they were washed in sterilized water. Small fragments were excised from the margin of rotted tissues and plated on potato dextrose agar (PDA) medium added with streptomycin sulfate (25 mg/l). Plates were incubated at temperatures ranging from 22 to 25°C under a light/dark regime (12 h/12 h). Gray soft fungal colonies developed and produced branched conidiophores that supported unicellular, elliptical to ovoid conidia measuring 8.8 to 14.3 × 7.1 to 10.0 (mean: 11.3 × 8.4) µm (n = 50). These characteristics were similar to those of *Botrytis cinerea* (Ellis 1971). The DNA of the isolate DB23MAR01 was extracted from a pure culture with the E.Z.N.A. Fungal DNA Mini Kit (Omega Bio-Tek). The G3PDH, NEP1, and NEP2 regions were examined (primers: G3PDHfor+/G3PDHrev+, NEP1(−207)for/NEP1(+1,124)rev, and NEP2(−200)for/NEP2(+1,147)rev) (Staats et al. 2005, 2007). Three sequences of 871 (gpdh3), 1,103 (NEP1), and 680 (NEP2) base pairs were obtained (GenBank accession nos. OR355007, OR355008, and OR355009, respectively). A BLASTn search showed 100% (gpdh3), 99.64% (NEP1), and 100% (NEP2) identity with the *B. cinerea* isolate B05.10 (accession nos. OR355007, OR355008, and OR355009, respectively). In the pathogenicity test, the isolate DB23MAR01 was inoculated on three 5-month-old plants of *P. scutellarioides*. Mycelial discs (10 mm in diameter) obtained from cultures grown on PDA were applied on stems (10 discs per plant). Three control plants were treated with PDA discs without the pathogen. All plants were maintained in a moistened chamber for 8 days at temperatures ranging from 19 to 30°C. The first symptoms of infection appeared on inoculated stems 3 days after the inoculation. *B. cinerea* was reisolated from symptomatic stems. The pathogenicity test was carried out also by spraying approximately 15 leaves of 3.5-month-old plants of *P. scutellarioides* with a conidial and mycelium suspension at the concentration of 1×10^5 CFU/ml. Control plants were treated with sterile water. The plants were maintained in a moistened chamber for 8 days at temperatures ranging from 18 to 23°C. First, necrotic spots appeared on inoculated leaves approximately 13 days after the inoculation. *B. cinerea* was reisolated from symptomatic tissues. The control plants remained symptomless. *B. cinerea* has been reported on *P. scutellarioides* in the United States (Harlan and Hausbeck 2016). To the best of our knowledge, this is the first report of *B. cinerea* on *P. scutellarioides* in Italy, as well as in Europe. The cultivation of *P. scutellarioides* is increasing in Italy because of the ease of reproducing this species and its expanding use as a bedding plant. The control of *B. cinerea* on this host could become a serious problem for greenhouse cultivation, increasing the production costs.

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