First report of *Alternaria alternata* causing leaf spot on *Hosta fortunei* in Italy

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Received: 16 December 2020 / Accepted: 26 February 2021 / Published online: 22 March 2021
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Keywords Ornamental plants · Leaf spot · Gardens

In autumn 2019 and spring 2020, small and punctiform light-brown leaf spots were observed on 20 out of 50 20-year-old plants of *Hosta fortunei* (Liliaceae family) cultivated in a private garden near Biella (Northern Italy). Lesions expanded, affecting a large part of the leaf surface. From the margins of the necrotic tissues olivaceous fungal colonies were consistently isolated. A monoconidial culture on potato carrot media (PCA) produced dark-brown, ovoid or ellipsoid conidia, with 1 to 4 transverse and 0 to 2 longitudinal septa. They measured 10.8 to 36.4 (average 23.1) × 4.5 to 16.2 (average 8.1) µm (n = 50). Some of them had a light or brown short beak, 2.1 to 7.2 (average 4.2) µm. These morphological characteristics are consistent with the genus *Alternaria* sp. (Simmons 2007). A PCR was carried out for *tef1*, *endoPG* and *rpb2* regions of the isolate coded 19/45 (Woudenberg et al. 2015) (GenBank Accession Nos. MW281049; MW281050; MW281051 respectively). A BLASTn analysis exhibited 100% similarity with the isolate CBS 104.26 of *A. alternata* for *tef1* and *endoPG* (KP125074; KP123995) and 100% similarity with the ex-type CBS 916.96 for *rpb2* (KC584375). Three repeated pathogenicity tests (three plants/test) were carried out by spraying a conidial suspension at a concentration of 1×10^5 conidia/ml (5 ml/plants) on the leaves of three healthy plants of *H. fortunei*. Three plants sprayed with deionized water were

used as controls. Plants were covered with a plastic transparent bag and maintained in a greenhouse at 20–25 °C for 7 days. First symptoms were observed fourteen days after the inoculation, while controls remained healthy. *A. alternata* was consistently recovered from the infected tissues. According to the USDA-ARS Fungal Database (Farr and Rossman 2020), this is the first report of *A. alternata* on *H. fortunei* in Italy as well as elsewhere.

References

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