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This is a pre print version of the following article:

Original Citation:

Availability:

This version is available <http://hdl.handle.net/2318/1620643> since 2019-04-01T13:43:51Z

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First Report of a Leaf Spot Caused by *Boeremia exigua* var. *linicola* on Autumn Sage (*Salvia greggii*) in Italy and Worldwide

A. Garibaldi, G. Gilardi, S. Franco Ortega, and M. L. Gullino

Centre of Competence for Innovation in the Agro-Environmental Sector (AGROINNOVA), Largo Paolo Braccini 2, Italy; and M. L. Gullino, AGROINNOVA and DISAFA, Largo Paolo Braccini 2, Grugliasco, Italy.

Salvia greggii, autumn sage, is a perennial shrub, belonging to the Lamiaceae. Due to its pink to red flowers and its rusticity, this species is used in gardens in mixed borders and containers. During the fall of 2014, in a mountain garden located near Biella, northern Italy (45.6121660° N; 8.0562970° E; elev. 850 m), a leaf spot was observed on 12-month-old plants. All plants grown in the garden were affected, with 20 to 30% of leaves showing symptoms. First symptoms consisted of circular necrotic spots, with diameter ranging between 10 and 70 mm, well defined by a brown margin, and generally the center of the necrosis was bleached. Severely infected leaves became chlorotic and abscised. Infected plants rarely died, but the presence of lesions on mature plants decreased their aesthetic quality. The disease started from basal leaves on plants grown in shade and at higher relative humidity, progressing up and outward on the plants, until they were almost completely defoliated. A fungus was consistently isolated from the margin of the necrotic lesions using potato dextrose agar amended with 25 mg/liter streptomycin sulfate. After 7 days, black 140 to 225- μ m-diameter pycnidia developed, releasing hyaline, elliptical, and aseptate conidia measuring 4.8 to 9.2 \times 1.6 to 4.3 (avg. 6.9 \times 3.1) μ m. On the basis of its morphological characteristics, the fungus was identified as *Phoma* sp. (Boerema and Howeler 1967). The Internal Transcribed Spacer (ITS) region of rDNA was amplified using the primers ITS4/ITS6 (White et al. 1990) and sequenced. BLASTn analysis (Altschul et al. 1997) of the 463-bp amplicon (GenBank Accession No. KU512286) showed 100% homology with *Boeremia exigua* var. *linicola* (syn. = *Phoma exiguavar. linicola*) (EU573009.1). Pathogenicity tests were performed by spraying leaves of three healthy 12-month-old potted *S. greggii* plants (70 to 80 cm high) with a spore and mycelial suspension of 10⁵CFU/ml. Three noninoculated plants served as controls. After inoculation, each plant was covered with a plastic bag and kept in a growth chamber at 20°C, in 80 to 90% relative humidity for 5 days. The first lesions developed on leaves 7 days after inoculation, while control plants remained healthy. The fungus was consistently reisolated from the lesions. The pathogenicity test was carried out twice. The presence of different species of *Phoma* (*P. exigua*, *P. nepeticola*, and *P. strasseri*) has been reported on *Salvia officinalis* as well as on other plants belonging to the Lamiaceae in Poland (Zimowska 2011). This is the first report of *B. exigua* var. *linicola* on *S. greggii* in Italy and worldwide. The disease, at present, is limited to a few gardens and may spread to other areas. Isolates of *B. exigua* have been obtained from over 200 genera of plants (Boerema et al. 2004) and this report expands the list with a new host.

References

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