

First Report of *Phoma herbarum* Causing Leaf Spot of Woodland Sage (*Salvia nemorosa*) in Northern Italy

APS apsjournals.apsnet.org/doi/full/10.1094/PDIS-04-17-0606-PDN



[Previous Article](#) | [Next Article](#)

Posted online on 24 Jul 2017.

<https://doi.org/10.1094/PDIS-04-17-0606-PDN>

DISEASE NOTES

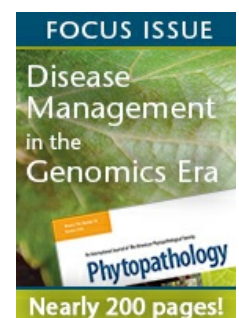
G. Gilardi and S. Matic, Centre of Competence for the Agro-Environmental Sector (AGROINNOVA), 10095 Grugliasco, Italy; M. L. Gullino,[†] Centre of Competence for the Agro-Environmental Sector (AGROINNOVA), 10095 Grugliasco, Italy; and DISAFA, University of Torino, 10095 Grugliasco, Italy; and A. Garibaldi, Centre of Competence for the Agro-Environmental Sector (AGROINNOVA), 10095 Grugliasco, Italy.

- [Citation](#)

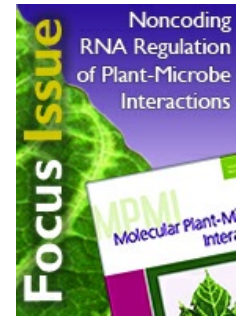
 Open Access.

Woodland sage (*Salvia nemorosa* L.) is a hardy herbaceous perennial plant widely used in parks and public gardens in Italy. During the summer of 2016, a new leaf spot was observed on 90-day-old plants grown in the gardens of the Venaria Castle located in Venaria Reale, near Turin, in Piedmont, northern Italy. At temperatures between 25 and 30°C, 70% of plants of about 100 grown in the garden were affected, though at different levels. First symptoms of the disease appeared as circular brown leaf spots (1 to 3 mm), gradually increased in number to 30 to 40, changing from circular to elliptical or irregular, eventually covering a large percentage of the leaf and causing leaf death. Lesions were dark brown to black, generally surrounded with a yellow halo. As lesions developed, they became gray and scattered black specks appeared in the center of the spots. A fungus was consistently isolated from several isolations carried out on potato dextrose agar amended with 25 mg/liter of streptomycin sulfate from the margin of the necrotic lesions. After 10 days, black pycnidia 52.1 to 64.9 µm and 118.0 to 125.0 µm

- Published: 24 Jul 2017
- Accepted: 7 Jun 2017



diameter were observed, releasing masses of hyaline, elliptical conidia measuring 3.4 to 7.7 (avg. 4.5) and 1.3 to 1.9 (avg. 1.5) μm . On the basis of morphological characteristics, it was identified as *Phoma* sp. (Boerema et al. 2004). DNA from one isolate coded IT36 was obtained using the E.Z.N.A. Fungal DNA Mini Kit (Omega Bio-Tek, Darmstadt, Germany). A PCR reaction was performed using primers ITS1/ITS4 to amplify the internal transcribed spacer, the intergenic region between 28S and 18S sequences of the ribosomal RNA, including the 5.8S sequence. PCR product was purified and sent for sequencing to BMR Genomics (Padova, Italy). BLASTn analysis (Altschul et al. 1997) of the 544-bp sequence showed a 99% identity with the corresponding sequence in GenBank for *P. herbarum* (accession no. FN868459). The sequence was deposited to GenBank (KY947522). A pathogenicity test was carried out by spraying a conidial suspension of 10^6 conidia ml^{-1} from a single-spore culture of strain IT36 onto foliage of 60-day-old *S. nemorosa* maintained under >90% relative humidity for 72 h after inoculation. Plants (three per treatment) were kept in a glasshouse at an average temperature of 24°C (minimum 20°C, maximum of 28°C). Lesions developed on leaves 8 days after inoculation, while control plants remained healthy. *P. herbarum* was consistently reisolated from the lesions. The pathogenicity test was carried out twice with the same results. To our knowledge, this is the first report of *P. herbarum* on *S. nemorosa* in Italy and worldwide. The wide host range of *P. herbarum* is well known (Farr and Rossman 2017; Kinsey 2002) and this report extends it to a new host.



References: Section:

Altschul, S. F., et al. 1997. Nucleic Acids Res. 25:3389.
<https://doi.org/10.1093/nar/25.17.3389>

Boerema, G. H., et al. 2004. Pages 32 and 82 in: Phoma Identification Manual. CABI Publishing, Wallingford, U.K.

Farr, D. F., and Rossman, A. Y. 2017. Fungal Databases, Syst. Mycol. Microbiol. Lab. ARS, USDA. Online publication. Retrieved 19 April 2017, from <http://nt.ars-grin.gov/fungaldatabases/>

Kinsey, G. L. 2002. *Phoma herbarum*. No 1501. IMI Descriptions of Fungi and Bacteria, CABI Publishing, Wallingford, U.K.

- [Citation](#)
-
-
-