

Disease Note Diseases Caused by Fungi and Fungus-Like Organisms First Report of *Colletotrichum incanum* Causing Leaf Spots on Common Bean in Europe (Slovenia)

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Slovenia Funding: The work was funded by the Ministry of Agriculture, Forestry and Food and conducted as part of research programs P4-0072 and P4-0431, financed by the Slovenian Research and Innovation Agency (ARIS), and the Horizon 2020 Project INCREASE funded by the European Union. Plant Dis. 108:2231, 2024; published online as <https://doi.org/10.1094/PDIS-02-24-0490-PDN>. Accepted for publication 24 April 2024. A

Phaseolus vulgaris L. leaf showing necrotic spots was collected in an experimental bean field in central Slovenia in August 2021. The field contained diverse common bean lines sourced from genebank collections, with each line represented by 10 plants. While symptomatic leaves were seen across various lines, the reported species was derived exclusively from a Huasca Huallaga Colorado plant (single-seed descent, USDA accession PI153714, doi:10.18730/H7P9N), a Peruvian landrace. After incubating the leaf for 2 days at ambient temperature in a moist chamber, setose acervuli developed producing curved, distally tapering, and proximately truncated conidia. Single-spore cultures developed equally shaped conidia measuring 14.5 to 21.5 (average 18.5) × 3 to 4 (average 3.5) μm (n = 60) on corn meal agar when mounted in lactic acid. Obtained morphological characters and sequences of the partial actin (GenBank accession OR208162), beta-tubulin (OR208164), and histone 3 (OR208165) genes identified the isolate as *Colletotrichum incanum* H.-C. Yang, J.S. Haudenschild & G.L. Hartman. Sequences were identical to those from CBS 133485 (= NRRL 62592, IL6A), ex-type strain of *C. incanum* (KC110823, KC110814, and KC110796). Partial sequences of the chitin synthase gene (OR208163), not available for the ex-type strain, was identical to sequences of other *C. incanum* strains reported from China (KP145539, ON189040, and OQ613679 to OQ613686) or differed in two nucleotide positions (OL471268 and OL471269). The strain from Slovenia was deposited in the CBS biobanks of the Westerdijk Fungal Biodiversity Institute (Utrecht, The Netherlands) as CBS 150848. Pathogenicity of the strain was tested by spraying approximately 3 × 10⁵ conidia as a watery spore suspension onto each leaf of six greenhouse-grown, 3-week-old common bean plantlets (cv. KIS Amand). Nonsterile commercial substrate (Potgrond H, AGRO-FertiCrop) was used, and natural light conditions at ambient temperatures (18 to 23°C) were applied. Sterile water was sprayed on six equally grown negative control plants. Treated plants showed small brownish spots after 3 weeks, similar to those described by Yang et al. (2014) on soybean. Setose acervuli formed within 5 days after detached leaves were incubated in moist chambers. No acervuli formed on negative control plants. Conidia reisolated from these acervuli and obtained cultures were morphologically identical to originally obtained conidia and cultures and those used for performing the pathogenicity test. Anthracnose is an important disease of common bean attributed to various races of *C. lindemuthianum* (Sacc. & Magnus) Briosi & Cavara (Nunes et al. 2021). Reporting an additional agent potentially able to cause diseases in common bean and so far not known to occur in Europe is of high relevance as the various genetic bean lines used in Europe may show alternative susceptibility levels to it. However, symptoms caused by *C. incanum* seem to be less severe as those caused by *C. lindemuthianum* and the species belongs to the *C. spaethianum* species complex, whose members have so far not been considered as pathogens of economic importance (Talhinhas and Baroncelli 2021). Yang et al. (2014) based *C. incanum* on isolates from soybean petioles (U.S.A.) and associated it with common bean by reidentifying the strain ATCC 64682 obtained by Tu (1990) in Canada. Database queries revealed that it was encountered also on sugar beet (U.S.A.; Hanson et al. 2023) and on various crop hosts in China (e.g., chili; Diao et al. 2017), but not in Europe. References: Diao, Y.-Z., et al. 2017.

Pers.: Mol. Phylogeny Evol. Fungi 38:20.Hanson, L. E., et al. 2023. New Dis. Rep. 47:e12152.Nunes, M. P. B. A., et al. 2021. Crop Sci. 61:3877.Talhinhas, P., and Baroncelli, R. 2021. Fungal Divers. 110:109.Tu, J. C. 1990. Plant Dis. 74:394.Yang, H.-C., et al. 2014. Mycologia 106:32.The author(s) declare no conflict of interest.Keywords: bean anthracnose, fungi, leaf spot, oilseeds and legumes,pathogen detection†Indicates the corresponding author.H.-J. Schroers; Hans-Josef.Schroers@kis.si© 2024 The American Phytopathological SocietyPlant Disease / July 2024 2231

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