Disease Notes (continued)

Veronica sibirica Leaf Spots Caused by Phacellum veronicae, a New Disease in China. Q. R. Bai, S. Han, Y. Y. Xie, and J. Gao, Laboratory of Plant Pathology, College of Agriculture, Jilin Agricultural University, Changchun 130118, Jilin Province, P. R. China; and Y. Li, Engineering Research Center of Chinese Ministry of Education for Edible and Medicinal Fungi, Jilin Agricultural University, Changchun 130118, Jilin Province, P. R. China. Plant Dis. 97:1662, 2013; published online as http://dx.doi.org/10.1094/PDIS-11-12-1052-PDN. Accepted for publication 8 April 2013.

Veronica sibirica (Veronicastrum sibiricum) is an erect perennial herb, an ornamental, and an traditional Chinese medicine plant distributed mostly in northeastern, northern, and northwestern China. It has dehumidifying and detoxifying properties, and is mainly used for the treatment of cold, sore throat, mumps, rheumatism, and insect bites (4). In June 2008 through 2012, leaf spots of V. sibirica were observed in the Medicinal Herb Garden of Jilin Agricultural University (43°48′N, 125°23′E) and the medicinal plantations of Antu County (43°6′N, 128°53′E), Jilin Province. Leaf spots were amphiogenous, subcircular, angular-irregular, brown, and 1 to 10 mm in diameter; they occasionally merged into a larger spot with an indefinite margin or with a pale center and dark border. Pale conidiomata were hyphophyllous and scattered on the spots. The conidiophores were 100 to 400 μm high and clustered together to form synnema 20 to 50 μm in diameter, which spread out apically and formed loose to dense capitula. Conidiophores occasionally emerged through the stomata individually and produced conidia on the surface of the infected leaves. The conidiogenous cell terminal was germicidal-sinous with somewhat thickened and darkened conidial scars. Conidia were solitary or catenate, ellipsoid-ovoid or subcylin dric-fusiform, hyaline and spinulose, 4.01 to 7.18 × 11.16 to 20.62 μm with obtuse to somewhat attenuated ends, and slightly thickened, darkened hila. Six isolates were obtained from necrotic tissue of leaf spots and cultured on potato dextrose agar at 25°C. After incubation for 14 days, colony surfaces were white to pinkish. The colony diameter increased by 12 mm after 21 days’ incubation. Hyphae were hyaline, septate, and branched. Conidiophores grew individually or f ascularly. The symptoms and morphological characteristics were consistent with previous descriptions (1,2), and the fungus was identified as Phacellum veronicae (Pass.) (U. Braun 1990). The internal transcribed spacer (ITS) region of the nuclear rDNA was amplified using primers ITS4/ITS5 (3). The ITS was identical among all six isolates (HE995799) and 98% identical to that of P. veronicae (JQ020427, HQ690097). Pathogenicity was confirmed by spraying five 1-year-old V. sibirica seedlings with a 0.5% inoculated leaf extract. Disease symptoms appeared on the leaves as described earlier for the field-grown plants; the control plants remained healthy. The same fungus was reisolated from the leaf spots of inoculated plants. Currently, the economic importance of this disease is limited, but it may become a more significant problem, as the cultivated area of V. sibirica is increasing. To our knowledge, although infection has been reported in North America (Canada) (1), this is the first report of V. sibirica leaf spot caused by P. veronicae in the world, and it is a new disease in China.


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Creating a new disease entry with the eXTRA system.