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NEW DISEASE REPORT

First report of *Thielaviopsis populi* on hybrid poplar in Hungary

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In summer 2002, an unusual root disease was observed in Hungary in two stands of 3–4-year-old *Populus* × *euramericana*. The symptoms began with bark necrosis at the collar, which was frequently swollen, cracked and wounded by the xylophagous insects, *Aegeria apiformis* and *Anaerea carcharias*. Later, necrosis of the inner bark extended underground throughout most of the root system, before the attacked trees died.

From infected trees, *Fusarium solani* and *Cylindrocarpon destructans* were frequently isolated. In addition, *Thielaviopsis populi* (= *Chalara populi*) was less frequently isolated from necrotic bark and wood taken from the root collar. The isolate of *T. populi* was identified based on cultural characteristics on potato dextrose agar (PDA), the endoconidia and aleurioconidia. The ITS sequence of the nuclear rDNA (GenBank accession AY423551) was identical to that of two other isolates (CBS 484·71 and 486·71) of *T. populi* from diseased poplar in Belgium (Veldeman, 1971). Perithecia of a *Ceratocystis* species with hat-shaped ascospores were observed on affected wood after 7–10 days' incubation in a moist chamber, but the formation of the sexual state could not be reproduced in culture, even in pairings with the CBS cultures. Previously, *T. populi* was thought to be asexual (Paulin-Mahady *et al*., 2002). A pathogenicity test was conducted under laboratory conditions by inoculating wounds of 2-year-old sprouts of *P.* × *euramericana* with mycelium. Lesions averaging 25 × 13 mm were produced in the inner bark after 5 weeks (compared with 45-cm lesions produced by *Fusarium* in similar inoculations). Necrotic lesions were not observed in control inoculations.

Thielaviopsis populi was first described in Belgium, where it caused bark lesions in stems of *P.* × *euramericana* cvs Robusta and Gelrica (Veldeman, 1971). The fungus shows some similarity to the conidial state of *C. fimbriata*, which causes cankers on *P. tremuloides* and *P. balsamifera* in North America and hybrid poplars in Poland (Gremmen & de Kam, 1977), but *T. populi* differs from *C. fimbriata* in its conidial states and ITS sequence (Paulin-Mahady *et al*., 2002). This is the first report of *T. populi* outside of Belgium. The fungus appears to be a weak pathogen and plays a perhaps minor role in a complex disease syndrome in Hungary.

References

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