

Cylindrocladium Leaf Spot, Blight, and Crown Rot, New Diseases of Mastic Tree Seedlings Caused by *Cylindrocladium scoparium*

G. Polizzi, A. Vitale, and I. Castello, Dipartimento di Scienze e Tecnologie Fitosanitarie, University of Catania, Via S. Sofia 100, 95123 Catania, Italy; and J. Z. Groenewald and P. W. Crous, Centraalbureau voor Schimmelcultures, Fungal Biodiversity Centre, Fungal Biodiversity Centre, Uppsalalaan 8, 3584 CT Utrecht, the Netherlands

The mastic tree (*Pistacia lentiscus* L., Anacardiaceae) is an important sclerophyllous evergreen shrub in the Mediterranean area where it is the dominant component of maquis and garrigues, which is vegetation composed of shrubs, or scrub, usually not exceeding 3 m high. In October 2005, new widespread diseases were noticed in a nursery in eastern Sicily (Italy) affecting container-grown, 1-year-old mastic tree seedlings. Symptoms were detected on approximately 40% of the 5,000 plants and consisted of minute, brown spots, stem lesions, blight, and defoliation. Occasionally, symptoms of crown and root rot were observed. A *Cylindrocladium* sp. was consistently isolated from rotted crown and roots, leaf spots, and stem lesions on potato dextrose agar. Morphological features of the fungus including conidiophores, conidia, and terminal vesicles were studied under a light microscope. Five *Cylindrocladium* isolates were cultured on carnation leaf agar (CLA) and identified as *C. scoparium* Morgan (teleomorph *Calonectria morganii* Crous, Alfenas & M.J. Wingf.) on the basis of their pyriform to broadly ellipsoidal terminal vesicles, conidiophore branching pattern, conidium and perithecial morphology, as well as their ability to mate with tester strains of selected *C. scoparium* isolates (2,3). Sequences of partial β -tubulin (GenBank Accessions Nos. DQ521599 and DQ521600) and histone H3 genes (GenBank Accessions Nos. DQ521601 and DQ521602) were generated as described previously (1) for two of the isolates (CBS 119669 and CBS 119670, respectively). A BLAST analysis of the β -tubulin sequences revealed 100% similarity with *C. morganii* (GenBank Accessions Nos. AF210872, AF210874, and AF210875). No histone H3 sequences are currently available in the GenBank database for *C. morganii*, and the two sequences generated in this study, therefore, represent the first publicly available histone H3 sequences for this species. Koch's postulates were fulfilled by inoculating 20 1-year-old mastic tree seedlings with a spore suspension of the fungus (10^5 conidia per ml) obtained from 14-day-old single-spore colonies grown on CLA at 24°C under fluorescent cool white lights on a 12-h light/dark regimen. Following inoculation, all plants were maintained in plastic bags in a growth chamber in which the temperature was $25 \pm 1^\circ\text{C}$ and relative humidity was 90 to 95%. The same number of seedlings was used as a control. After 5 to 7 days, foliar symptoms resembling those seen in the nursery were detected on inoculated plants. Crown and root rot symptoms appeared on two plants after 1 month. *C. scoparium* was reisolated from the artificially infected tissues. No symptoms were detected on the control plants. To our knowledge, this is the first record of this disease in mastic tree and the first record of *C. scoparium* in Italy. This report also represents the first definitive confirmation of *C. scoparium* in Europe.

References: (1) P. W. Crous et al. *Stud. Mycol.* 50:415–430, 2004. (2) P. W. Crous and M. J. Wingfield. *Mycotaxon* 51:341, 1994. (3) C. L. Schoch et al. *Mycologia* 91:286, 1999.