



First report of *Calonectria tunisiana* causing crown and root rot on *Eucalyptus globulus*

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During autumn 2019, a widespread crown and root rot was observed in a commercial nursery in Catania province, Italy, on about 5000 potted 10–12 month-old plants of *Eucalyptus globulus* Labill. More than 15% of plants obtained from cutting showed brown to black necrotic lesions on crown, and root were decayed. Discolouration was observed under the bark. Diseased tissues of twenty plants were surface disinfected for 1 min in 1.5% sodium hypochlorite solution, rinsed in sterile water, placed on potato dextrose agar (PDA) amended with 100 mg/l of streptomycin sulfate, and then incubated at 25 °C for seven days. *Calonectria* sp. was consistently isolated. Colonies surface and reverse sienna, developed sparse aerial mycelium with abundant cylindrical conidia, rounded at ends, 1-septate, 47 to 51 × 4 to 6 µm. Conidiophores were stipe septate, hyaline, smooth, 42–95 × 7–11 µm and phialides were doliform to reniform, hyaline, aseptate, 8–13 × 3–5 µm. Chlamydo spores were present. These morphological characteristics were consistent with the original description of *C. tunisiana* L. Lombard, G. Polizzi & Crous (Lombard et al. 2011). Part of *tef1* gene of CAL-EU1 and CAL-EU2 isolates was amplified using EF1-728F and EF1-986R primers. The sequence data were deposited in GenBank (accession Nos. MT365928 and MT365929). The obtained *tef* sequences showed 100% identity with the tester isolate DISTEF-TME1 of *C. tunisiana* (JN607286). Pathogenicity test was conducted on 6-month-old cuttings of *E. globulus*. The inoculum consisted of mycelial plug inserted

at the crown level. Fifteen plants were used. Control consisted of sterile PDA plugs. Plants were incubated into a growth chamber at 25 °C. The same symptoms observed in field appeared on inoculated plants after 1 month and after 2 months all plants died. The pathogen was re-isolated from the artificially inoculated plants, and identified as previously described. *Calonectria* species are widespread in Sicily on ornamental crops (Polizzi et al. 2012; Vitale et al. 2013) while *C. tunisiana* was reported only in Tunisia (Lombard et al. 2011). To our knowledge, this is the first report of *C. tunisiana* causing disease on *E. globulus* and it is the first detection of the pathogen in Europe.

References

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