

A New *Phytophthora* sp. Causing Root and Collar Rot on *Pistacia lentiscus* in Italy

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Lentisk (*Pistacia lentiscus* L., Anacardiaceae) is an evergreen shrub that is widespread over the Mediterranean Region. The species is also cultivated as an ornamental plant in Italy. In August 2008, a survey carried out in a forest nursery in Sardinia (39°57'N, 9°13'E) revealed the presence of symptoms such as wilting and desiccation of foliage associated with root and collar rot on 1- to 3-year-old potted seedlings of lentisk. Approximately 30% of 1,500 potted plants were affected. A *Phytophthora* sp. was consistently isolated from infected roots on synthetic mucor agar medium. Colonies on carrot agar (CA) were stellate to slightly radiate with low aerial mycelium. Growth occurred from 6 to 38°C, with an optimum around 30°C (mean radial growth rate was 11.8 mm per day). Sporangia were produced abundantly in unsterile pond water; they were nonpapillate, persistent, ellipsoid to obpyriform, (57.8–) 80.5 (–100.5) × (30.2–) 39.3 (–51.5) µm, with a length/breadth ratio of 2.0:1, proliferating internally or externally. Hyphal swellings were spherical to irregular and frequently produced in chains. Chlamydospores were not observed. Isolates were heterothallic and produced oogonia with amphigynous antheridia when paired with A2 mating type of *Phytophthora drechsleri* and *P. cryptogea*. Cultural and morphological features were in close agreement with those recently published for *Phytophthora* sp. "*niederhauserii*" (4). The rDNA internal transcribed spacer (ITS) sequence (ITS1-5.8S-ITS2) of a representative isolate (LEN1) was submitted to GenBank (Accession No. GU119914) and BLAST searches showed 100% similarity with sequences of *P. sp. "niederhauserii"* deposited in GenBank (Accession Nos. GQ848201 and EU244850). The strain LEN1 was stored in the culture collection of the Department of Plant Protection at the University of Sassari. Its pathogenicity was verified by inoculating 10 1-year-old lentisk seedlings grown in pots. A mycelial plug (3 to 4 mm²) taken from the margin of a 4-day-old culture grown on CA was put in a shallow wound (~3 mm) made by a sterile scalpel at the root collar of each seedling. All plants were kept in a greenhouse at 25°C in natural daylight. After 20 days, inoculated plants began to show symptoms similar to those observed on naturally infected plants. Five control plants inoculated with sterile CA plugs did not develop any disease symptoms. The pathogen was reisolated from infected tissues, thus fulfilling Koch's postulates. *P. sp. "niederhauserii"* has not been formally described, however, so far there have been several reports of this species in Europe (1,3). Previously, other *Phytophthora* spp. were reported associated with lentisk root rot in Italy (2). To our knowledge, this is the first report of *P. sp. "niederhauserii"* on *Pistacia lentiscus* and it emphasizes the susceptibility of the Mediterranean species to this new pathogen.

References: (1) A. Józsa et al. Plant Pathol. 59:1166, 2010. (2) G. Magnano Di San Lio et al. Micol. Ital. 21:3, 1992. (3) E. Moralejo et al. Plant Pathol. 58:100, 2009. (4) A. Pérez-Sierra et al. Plant Dis. 94:534, 2010.