

## First Report of Leaf Spot of Lamb's Lettuce (*Valerianella olitoria*) Caused by *Myrothecium roridum* in Italy

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During the spring of 2015, plants of lamb's lettuce (*Valerianella olitoria*) 'Palace' grown under plastic-house in the Lombardy Region (Northern Italy) showed symptoms of a previously unknown foliar disease. Symptoms were observed on 15-day-old plants and consisted of small, circular, gray-brown leaf spots, 1 to 3 mm in diameter, with a well defined border. As the lesions expanded (up to 30 mm in diameter), they developed concentric rings, coalesced, and the leaf blighted down. Slightly green to black sporodochia appeared on the affected leaves, at different age. Roots were asymptomatic. Fifteen hectares of plastic-houses were affected with 5 to 15% of plants exhibiting symptoms. Isolations were carried out from symptomatic affected leaf tissues sections (each 1 mm<sup>2</sup>) dipped in 1% sodium hypochlorite for 1 min and rinsed in sterilized water, then placed on potato dextrose agar (PDA) amended with 25 mg/liter of streptomycin sulfate. A white slow-growing fungus was obtained and, 7 days after isolation, developed black sporodochia similar to those present on the affected leaves. Conidia were cylindrical, non-septate, 3.1 to 7.2 × 1.5 to 3.3 (avg. 5.4 × 2.4) μm. The morphology corresponded to *Myrothecium roridum* Tode ex Fr. (Fitton and Holliday 1970). The ITS region of rDNA was amplified using the primers ITS1/ITS4, and sequenced. BLAST analysis (Altschul et al. 1997) of the 531-bp segment showed 99% similarity with *M. roridum* (GenBank Accession Nos. KF494828.1, KJ813720.1, and HQ115647.1). The nucleotide sequence has been assigned the GenBank Accession No. KT354921. To confirm pathogenicity, 20-day-old leaf lamb's lettuce 'Palace' plants were transplanted in 2-liter pots, filled with a steamed peat:perlite:sand (60:20:20 vol/vol) substrate and maintained in a growth chamber at 22 to 24°C. Five pots per treatment were used, with 15 to 20 plants/pot. The artificial inoculation was carried out by spraying leaves of 75 to 100 plants with a spore suspension (1 × 10<sup>5</sup> conidia/ml) prepared from 15-day-old PDA cultures of one representative isolate of the pathogen. Control plants were inoculated with distilled water. Plants were kept covered with plastic bags for 5 days. Leaf spots similar to those of the original plants, developed 6 days after the inoculation, with a disease incidence ranging from 70 to 90% of the plants affected. All the noninoculated plants remained asymptomatic. A fungus morphologically identified as *M. roridum* was consistently isolated from all the symptomatic plants. The pathogenicity test was conducted twice, showing the same results. This is the first report of *M. roridum* on *V. olitoria* in Italy as well as worldwide. The same pathogen has been observed on lettuce in Spain (Tuset et al. 1986) and on *Valeriana officinalis* in Tanzania (Riley 1960). Currently, this disease is spreading to several farms in northern Italy.

Altschul, S. F., et al.. 1997. Nucleic Acids Res. 25:3389. <https://doi.org/10.1093/nar/25.17.3389> Crossref, ISI.

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Riley, E. A. 1960. Mycology 75:1.

Tuset, J. J., et al.. 1986. Invest. Agraria 1:251.