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Disease Notes

First Report of *Myrothecium roridum* Causing Leaf Spot on Garden Hydrangea in the United States

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Garden hydrangea (*Hydrangea macrophylla*) is a popular flowering shrub that grows well in Tennessee but foliar diseases impact their appearance, health, and market value. Leaves of garden hydrangea showed necrotic lesions with concentric rings of brown and dark brown at the Tennessee State University Research Center in McMinnville. A fungus was recovered from June and July leaf samples with 20% frequency of isolation from approximately 40 leaf pieces that were surface sterilized and plated in potato dextrose agar (PDA). Isolates developed white colonies and dark gray-to-black, spore-bearing mycelial cushions (sporodochia) that formed on older colonies (30 to 45 days old) at 25 ± 2°C. Conidia were hyaline to slightly dark, one-celled, ovoid to elongate with rounded ends, and 2.0 to 2.5 × 5.5 to 6.5 μm. These morphological characteristics were consistent with those described for *Myrothecium roridum* Tode ex Fr. (1). DNA sequence for three isolates of this fungus showed identical internal transcribed spacer (ITS) region sequences (GenBank Accession No. HM215150) with 99% maximum sequence identity to *M. roridum* isolates (GenBank Accession Nos. AJ301994.1 and AJ608978). Another close match (97%) was with *M. gramineum* (GenBank Accession No. FJ235084) and *M. tongaense* (GenBank Accession No. AY254157). Pathogenicity of *M. roridum* was evaluated on detached leaves from three hydrangea cultivars, Nikko Blue, All Summer Beauty, and Blue bird. Four, medium-size, detached leaves were placed in moist chambers and inoculated with 5-mm mycelial plugs from 14-day-old cultures; sterile PDA was used as the control treatment. A randomized, complete-block experimental design was used with a replication of four leaves per cultivar. Incubation temperature was 26 ± 2°C. Necrotic lesions started 4 to 5 days after inoculation in all inoculated leaves; lesions expanded to cover 10 to 25% of the leaf surface and formed concentric rings; sterile PDA plugs did not produce leaf lesions. This experiment was

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repeated twice and similar symptoms were produced; *M. roridum* was reisolated from all inoculated leaves. Spray inoculation of detached leaves of hydrangea cv. Pretty Maiden with 5×10^4 spores/ml produced similar symptoms; leaves sprayed with water remained symptom free. *M. roridum* has a wide host range and similar symptoms have been reported on other ornamentals including salvia (2), begonia (<http://mrec.ifas.ufl.edu/fofoliage/fofolnotes/begonias.htm>), gardenia (http://cfextension.ifas.ufl.edu/agriculture/nursery_production/documents/Gardenia.pdf), and cotton (3). To our knowledge, this is the first report of *M. roridum* causing leaf spot on *H. macrophylla* in the United States.

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