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## DISEASE NOTES

# Laurel Wilt, Caused by *Raffaelea lauricola*, is Detected for the First Time Outside the Southeastern United States

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## ABSTRACT

In October 2014, a survey for diseases and pests of an emerging fruit crop, avocado (*Persea americana*) ([FAO 2000](#)), was conducted in Southern Shan State of Myanmar (aka Burma). In the Tuanggyi District (1,400 m elevation, 20.5°N 97°E), monocultures of up to 20 ha were observed, whereas in the Ywangan District (1,850 m elevation, 21.2°N 96.4°E), avocado trees were used primarily as shade for the production of coffee (*Coffea arabica*). In both districts, symptoms of laurel wilt were observed on avocado, but no other tree. Trees exhibited sapwood discoloration, leaf necrosis and defoliation, and, according to producers, usually died within a month or two of symptom development. During the survey, isolates with the colony phenotype of *Raffaelea lauricola*, the cause of laurel wilt, were recovered from symptomatic sapwood on half strength potato dextrose agar amended with streptomycin sulfate. Colonies were hyaline and initially yeast-like, but later produced radiate aerial mycelium with mucilaginous growth ([Fraedrich et al. 2008](#)). Tests were conducted in the United States with DNA from six representative isolates from Tuanggyi and Ywangan and PCR primers for two diagnostic microsatellite loci ([Dreaden et al. 2014](#)); *R. lauricola*-specific amplicons were generated for each isolate and locus, confirming the identity of the fungus associated with trees exhibiting laurel wilt in Myanmar. In a quarantine greenhouse in Gainesville, FL, three trees each of avocado and swamp bay (*P. palustris*) were artificially

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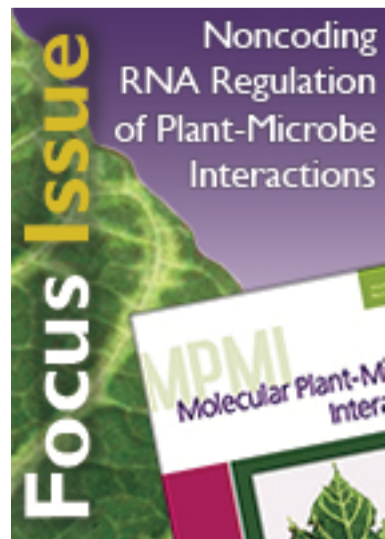
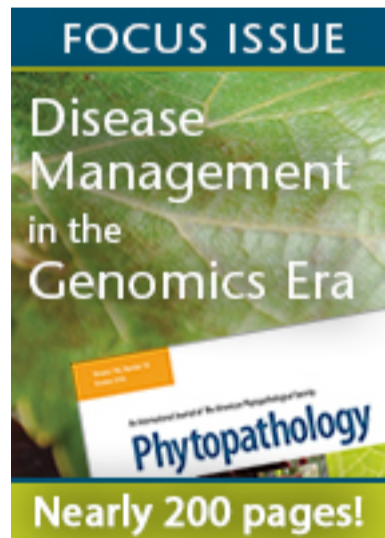


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inoculated with three isolates from Myanmar and a representative isolate of *R. lauricola* from the United States. Each isolate caused laurel wilt in each of two experiments, and the pathogen was recovered from affected, but not from noninoculated control, trees; their identity as *R. lauricola* was confirmed with the above microsatellite loci ([Dreaden et al. 2014](#)). Although *R. lauricola* was previously identified in Asia, and probably introduced from Asia to the southeastern United States with its ambrosia beetle symbiont, *Xyleborus glabratus* ([Harrington et al. 2011](#)), laurel wilt had previously been reported only in the southeastern United States ([Fraedrich et al. 2008](#)). This is the first report of laurel wilt in the Asian native range of *R. lauricola* and *X. glabratus*. Laurel wilt currently affects commercial avocado production in South Florida; it clearly poses a threat to future production in Myanmar.



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