



About the cover for  
December 2016

ISSN: 0191-2917

**SEARCH**

- Phytopathology
- Plant Disease
- MPMI

**search**[Advanced Search](#)**Resources**

- [Subscribe](#)
- [About Plant Disease](#)
- [First Look](#)
- [Most Downloaded Articles](#)
- [Submit a Manuscript](#)
- [Customer Care](#)
- [About My Password](#)
- [Rights and Permissions](#)
- [Plagiarism and Ethics](#)
- [Advertise](#)
- [e-Xtra](#)
- [Open Access](#)
- [ORCID Registry](#)



# plant disease

Editor-in-Chief: Alison E. Robertson  
Published by The American Phytopathological Society

[Home](#) > [Plant Disease](#) > [Table of Contents](#) > [Full Text HTML](#)[Previous Article](#) | [Next Article](#)

December 2016, Volume 100, Number 12  
Page 2520  
<http://dx.doi.org/10.1094/PDIS-03-16-0412-PDN>

**DISEASE NOTES**

## Bacterial Canker of Mango, *Mangifera indica*, Caused by *Xanthomonas citri* pv. *mangiferaeindicae*, Confirmed for the First Time in the Americas

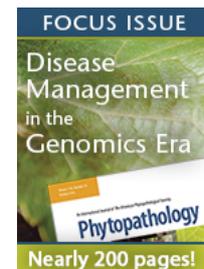
**G. Sanahuja, R. C. Ploetz, P. Lopez, J. L. Konkol, and A. J. Palmateer**, Tropical Research & Education Center, University of Florida, Homestead USA 33031; and **O. Pruvost**, CIRAD-Université de la Réunion, UMR PVBMT, Saint Pierre, La Réunion, F-97410 France.

[Citation](#) | [e-Xtra](#) [Open Access.](#)**ABSTRACT**

In June 2015, symptoms of what appeared to be bacterial canker (also known as bacterial black spot) were observed on mature fruits of mango, *Mangifera indica*, in the vicinity of Boynton Beach and Lake Worth, FL. Star-shaped lesions up to 2 cm in diameter erupted from the surfaces of 'Keitt', 'Haden', 'Springfels', and 'Lemon Zest' fruit, and oozed a sticky, clear exudate; symptoms were not observed on leaves or twigs. From lesions, a nonpigmented bacterium was recovered on yeast-peptone-glucose agar (YPGA) and characterized with *efp* and *dnak*, two housekeeping genes used by Bui Thi [Ngoc et al. \(2010\)](#) to classify pathovars of *X. citri*. Amplicons from a representative isolate were sequenced (KU746336 and KU746337) and maximum likelihood analyses (Tamura-Nei model) with MEGA 6.06 placed the isolate among strains of *Xanthomonas citri* pv. *mangiferaeindicae* (Xcm). In incubator studies (30°C day, 26°C night, 12-h photoperiod), the mesophyll of leaves on potted 'Keitt' and 'Haden' plants were injected with a hypodermic needle and  $1 \times 10^5$  CFU/ml of the isolate from 18-h YPGA colonies suspended in sterile deionized H<sub>2</sub>O. After 7 days, black lesions developed on inoculated leaves, but not on leaves injected with sterile deionized H<sub>2</sub>O. Diagnostic amplicons for Xcm were generated for isolates recovered from the lesions, and similar results were obtained when the experiment was repeated a second time. Bacterial canker is widespread in the Eastern Hemisphere ([Gagnevin and Pruvost 2001](#)), moved recently to West Africa ([Pruvost et al. 2011](#)), and was recently reported in Hawaii ([Yasuhara-Bell et al. 2013](#)). However, this is the first report of the disease in the Americas (prior reports of the disease in the region were erroneous ([Ah-You et al. 2007](#))). Only two of the top 10 mango-producing countries

**Quick Links**[Add to favorites](#)[E-mail to a colleague](#)[Alert me when new articles cite this article](#)[Download to citation manager](#)[Related articles found in APS Journals](#)**Article History**[Issue Date: 10 Nov 2016](#)[Published: 13 Sep 2016](#)[First Look: 11 Jul 2016](#)[Accepted: 4 Jul 2016](#)

This Journal is brought to you via a subscription from the CIRAD Dist

**CALL FOR PAPERS**  
*Special Focus Issue***Epidemiology**  
Submissions Due:  
February 1, 2017

are in the Americas, but the top exporter (Mexico) and three other countries in the region are among the top 10 exporters ([Evans and Mendoza 2009](#)). Environmental conditions in southern Florida appear to be ideal for an increased importance of bacterial canker in the region as well as other areas in the Americas in which production of this crop occurs.

### References:

Section:

**Ah-You, N.**, et al. 2007. *Phytopathology* 97:1568. 10.1094/PHTO-97-12-1568  
[\[Abstract\]](#) [\[ISI\]](#)

**Evans, E. A.**, and **Mendoza, O. J.** 2009. Page 606 in: *The Mango*, 2nd Ed. CAB International, Wallingford, UK.

**Gagnevin, L.**, and **Pruvost, O.** 2001. *Plant Dis.* 85:928. 10.1094/PDIS.2001.85.9.928  
[\[Abstract\]](#) [\[ISI\]](#)

**Ngoc, L. B. T.**, et al. 2010. *Int. J. Syst. Evol. Microbiol.* 60:515. 10.1099/ijms.0.009514-0  
[\[CrossRef\]](#) [\[ISI\]](#)

**Pruvost, O.** et al. 2011. *Plant Dis.* 95:774. 10.1094/PDIS-02-11-0098 [\[Abstract\]](#) [\[ISI\]](#)

**Yasuhara-Bell, J.** et al. 2013. *Plant Dis.* 97:1244. 10.1094/PDIS-11-12-1071-PDN  
[\[Abstract\]](#) [\[ISI\]](#)

[Citation](#) | [e-Xtra](#)

