



The premier source for peer-reviewed plant pathology research since 1911.

[Journals Home](#)[Books Home](#)[APS Home](#)[IS-MPMI Home](#)[My Profile](#)[Subscribe](#)[Search](#)[Advanced Search](#)[Help](#)[Share](#)[Subscribe](#)[Free alerts](#)[RSS](#)About the cover for
May 2014

ISSN: 0191-2917

SEARCH

Enter Keywords

☐ MPMI☐ Phytobiomes☐ Phytopathology☒ Plant Disease[search](#)[Advanced Search](#)

Resources

[Subscribe](#)[About Plant Disease](#)[First Look](#)[Most Downloaded
Articles](#)[Journals Impact](#)[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](#) > [Abstract](#)[Previous Article](#) | [Next Article](#)

May 2014, Volume 98, Number 5

Page 688

<https://doi.org/10.1094/PDIS-07-13-0715-PDN>

Disease Notes

First Report of *Diplodia seriata* Causing Pear Branch Canker Dieback in California

R. A. Choudhury, **P. Modi**, and **J. Hanstad**, Department of Plant Pathology, One Shields Ave, University of California, Davis 95616; **R. Elkins**, University of California Cooperative Extension, Lakeport 95453; and **W. D. Gubler**, Department of Plant Pathology, One Shields Ave, University of California, Davis 95616

[Open Access.](#)

California produces 26% of the United States pear crop on approximately 5,600 ha. A survey of seven northern California pear orchards (*Pyrus communis* cv. Bartlett) in summer 2010 revealed the presence of wedge-shaped cankers on 2- to 5-cm diameter branches, equating to 1- to 3-year-old wood. Many of the observed cankers occurred near pruning wounds, and there was decreased foliation on infected branches. Infected wood was surface disinfected with 95% ethanol and briefly flamed. After removing bark, small sections of diseased tissue were plated onto 4% potato dextrose agar (PDA) amended with 0.01% tetracycline and placed on the lab bench at 22°C until fungal growth emerged. Fungal colonies that were consistently isolated were transferred to fresh PDA using hyphal tip isolation. Fungal colonies were dark brown to gray with aerial mycelium and formed pycnidia after 15 days of incubation at 22°C. Conidia were brown, oval to oblong, and measured (16.5-) 20 to 24 (-26) × (7.5) 8.75 to 11 (-12.5) μm ($n = 50$). DNA from 14- to 21-day-old colonies was extracted and sequences of the rDNA internal transcribed spacer region and part of the β-tubulin gene were amplified using primers ITS4/ITS5 and Bt2a/Bt2b, respectively (2). The DNA sequences of fungal isolates from California showed 99 to 100% homology with the ex-type *Diplodia seriata* De Not. (1) CBS112555 deposited in GenBank. DNA sequences from three California isolates were submitted to GenBank with accession numbers KC937062, KC937065, KF481957, KF481598, KF481959, and KF481960. Pathogenicity tests were performed in March 2011 on 3-year-old Bartlett pear trees planted at an experimental farm in Davis, CA. A single, circular, 2-cm pruning wound at the top of the trunk was inoculated on each of three single-tree replications using 2-cm mycelial plugs from 14-day-old colonies growing on PDA. After inoculation, mycelial plugs were covered and sealed with Parafilm and aluminum foil for the duration of the trial. Three control trees were inoculated using sterile PDA plugs. Twelve months after inoculation, UCD103 and UCD105 were consistently re-isolated from the margin between necrotic and healthy tissue using the same methods described for the original isolation, and UCD102 was re-isolated in two out of three plants. The average lesion lengths of

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](#)

Am score 2

[See more details](#)[Tweeted by 3](#)[2 readers on
Mendeley](#)This Journal is brought to
you via a subscription from
the University of Florida

WHITE PAPER

Foundational and
Translational Research
Opportunities to
Improve Plant Health[Read Article Comments](#)

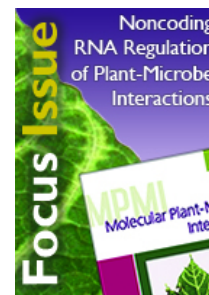
FOCUS ISSUE

Disease
Management
in the
Genomics Era

Nearly 200 pages!

UCD102, UCD103, UCD105, and control plants were 12.5, 17.3, 23, and 1 mm, respectively. Control lesions were short and sterile, and seemed to be a physiological reaction from the plant. A second pathogenicity test was completed in 5 months beginning in June 2012. UCD105 was consistently re-isolated, and UCD102 and UCD103 were re-isolated in two out of three plants. The average lesion lengths for UCD102, UCD103, UCD105, and control plants were 2, 3, 5, and 1 mm, respectively. Compared to grapevine (*Vitis vinifera*), the pathogen grows more slowly in pear tissue under natural conditions. To our knowledge, this is the first report describing *D. seriata* as a causal agent of pear branch canker in California. Canker diseases can reduce the lifespan of perennial plants, ultimately leading to long term economic losses for growers (3).

References: (1) A. J. L. Phillips et al. Fungal Diversity 25:141, 2007. (2) J. R. Urbez-Torres et al. Plant Dis. 90:1490, 2006. (3) J. R. Urbez-Torres and W. D. Gubler. Plant Dis. 93:584, 2009.



Cited by

A Method to Detect and Quantify *Eutypa lata* and *Diplodia seriata*-Complex DNA in Grapevine Pruning Wounds

Jérôme Pouzoulet, Philippe E. Rolshausen, Marco Schiavon, Sebastiaan Bol, Renaud Travadon, Daniel P. Lawrence, Kendra Baumgartner, Vanessa E. Ashworth, Gwénaëlle Comont, Marie-France Corio-Costet, Romain J. G. Pierron, Xavier Besson, and Alban Jacques

Plant Disease Aug 2017, Volume 101, Number 8, 1470-1480

[Abstract](#) | [Full Text HTML](#) | [PDF Print](#) | [PDF with Links](#) |

***Aspergillus* leaf spot of field bindweed (*Convolvulus arvensis* L.) caused by *Aspergillus niger* in China**

Xuekun Zhang, Hui Xi, Kejian Lin, Zheng Liu, Yu Yu, Yan Sun, and Jing Zhao

SpringerPlus Dec 2016, Volume 5, Number 1

[Crossref](#)

Black Spot Disease of Chinese Jujube (*Ziziphus jujuba*) Caused by *Fusarium incarnatum* in China

K. F. Guo, J. Sun, S. F. Zhao, and L. He

Plant Disease Feb 2016, Volume 100, Number 2, 529-529

[Citation](#) | [Full Text HTML](#)