

CURRICULUM VITAE

GREGORY JAMES REYNOLDS

WORK: University of California
Department of Plant Pathology
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EDUCATION:

2015, Ph.D. Plant Pathology, University of California, Davis
2010, M.S. Plant Pathology, University of Minnesota, St. Paul
2007, B.S. Applied Plant Science, University of Minnesota, St. Paul

EMPLOYMENT:

University of California, Department of Plant Pathology, Davis, CA
Ph.D. Candidate, 2013-Present

University of California, Department of Plant Pathology, Davis, CA
Graduate Student Researcher, 2010-2013

University of Minnesota, Department of Plant Pathology, St. Paul, MN
Research Fellow, 2010

University of Minnesota, Department of Plant Pathology, St. Paul, MN
Graduate Research Assistant, 2008-2010

USDA Forest Service, Northern Research Station, St. Paul, MN
Biological Science Technician (Insects and Disease), 2007-2008

UMore Park. University of Minnesota Agricultural Experiment Station, Rosemount, MN
Research Plot Coordinator intern, 2006

University of Minnesota, Department of Agronomy and Plant Genetics, St. Paul, MN
Laboratory Technician, 2004-2007

TEACHING:

Teaching assistant, SAS 30: Mushrooms, molds, and society (UC Davis, 2013)

Teaching assistant, PLP 120: Introduction to Plant Pathology (UC Davis, 2012)

Teaching assistant, CFANS 3001: Pests and Crop Protection, (Minnesota, 2009)

RESEARCH PROGRAM:

My PhD thesis research involves investigating costs and trade-offs associated with systemic acquired resistance (SAR) to pitch canker infection in *Pinus* species, caused by *Fusarium circinatum*. SAR occurs in pine trees after initial infection with pitch canker, and SAR-activated trees are then more resistant to subsequent infections by *F. circinatum*. It is assumed that there are ecological costs associated with induction of SIR, but such costs or trade-offs have not yet been identified in this system. I am working to quantify the impact of SAR on growth rate in Monterey pine (*P. radiata*), determine natural infection frequency on the Monterey Peninsula, and estimate the degree to which each infection contributes towards resistance to subsequent infections. These data will be incorporated into a matrix model to project population dynamics of *P. radiata* into the future. A meta-analysis of literature on costs of induced resistance is also being used to develop a model for competition between plants with the capability for SIR and those without. My background is in agronomy and remote sensing; I conducted my Master of Science research on the application of remote sensing for assessing severity of Rhizoctonia crown and root rot in sugar beet (*Beta vulgaris*).

AWARDS AND HONORS:

Henry A. Jastro Research Scholarship Award, 2013

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Henry A. Jastro Research Scholarship Award, 2011

M.F. Kernkamp Scholarship, 2009

Elwin Stewart Graduate Student Travel Award, 2009

Dr. Alan Dexter Award Scholarship, 2009

Kane County (IL) Farm Bureau Scholarship, 2007

Clara A. Auch Scholarship, 2004

Gold National Scholarship, 2004

COMMITTEE SERVICE:

Department of Plant Pathology, University of California:

President, Department of Plant Pathology Students, 2013-2014

Graduate Student Association department representative, 2011-2012

Plant Disease Clinic, 2010-present

Department of Plant Pathology, University of Minnesota:

Development, Alumni and External Relations Committee, 2008-2009

PRESENTATIONS:

“Costs of induced resistance to pitch canker disease in Monterey pine”, Pitch Canker Task Force Meeting, Davis, CA, 2012

“Hyperspectral remote sensing for detection of Rhizoctonia crown and root rot of sugar beet”, American Phytopathological Society National Meeting, Portland, OR, 2009

“Hyperspectral remote sensing for detection of Rhizoctonia crown and root rot of sugarbeet”, Sugarbeet Research and Extension Reporting Session, Fargo, ND, 2009

“Refining remotely sensed assessment of Rhizoctonia crown and root rot in sugar beet”, Upper Midwest Aerospace Consortium Working Group Meeting, Grand Forks, ND, 2009

GRANTS:

MacRae, I.V., Windels, C.E., Sims, A.L., and Laguette, S. 2009. Refining remotely sensed assessment of Rhizoctonia crown and root rot in sugar beet. Funded for \$35,000 by NASA.

PROFESSIONAL MEETINGS, CONFERENCES, WORKSHOPS, ETC., ATTENDED:

(* Notes that an abstract was published)

*American Phytopathological Society, National Meeting, Minneapolis, MN, 2014

*American Phytopathological Society, National Meeting, Providence, RI, 2012

Pitch Canker Task Force Meeting, Davis, CA, 2012

*American Phytopathological Society, National Meeting, Honolulu, HI, 2011

*American Society of Sugarbeet Technologists, Biennial Meeting, Albuquerque, NM, 2011

Upper Midwest Aerospace Consortium Working Group Meeting, Grand Forks, ND, 2009

*American Phytopathological Society, National Meeting, Portland, OR, 2009

Sugarbeet Research and Extension Reporting Session, Fargo, ND, 2009

American Phytopathological Society, National Meeting, Minneapolis, MN, 2008

PUBLICATIONS:

Peer-reviewed Journal Articles

Reynolds, G.J., Windels, C.E., MacRae, I.V., and Laguette, S. 2012. Remote sensing for assessing Rhizoctonia crown and root rot severity in sugar beet. *Plant Dis.* 96:497-505.

Reynolds, G.J., McRoberts, N., and Gordon, T.R. 2014. Projecting Monterey pine populations over time in the presence of pitch canker disease. *Ecol. Model.* (In preparation).

Reynolds, G.J., Windels, C.E., MacRae, I.V., and Laguette, S. 2014. Rhizoctonia crown and root rot reduces chlorophyll content in sugar beet. *Can. J. Plant Path.* (In preparation).

Non-refereed Technical Articles:

Reynolds, G., Windels, C.E., MacRae, I.V., and Laguette, S. 2009. Hyperspectral remote sensing for detection of Rhizoctonia crown and root rot of sugarbeet. 2008 Sugarbeet Res. Ext. Rept. 39:229-236.

Abstracts:

Reynolds, G.J., McRoberts, N., and Gordon, T.R. 2014. Modeling an observed shift towards resistance in distributions of pitch canker lesion lengths on *Pinus radiata*. Phytopathology 104:S.

Reynolds, G.J., McRoberts, N., and Gordon, T.R. 2012. Projecting Monterey pine populations over time in the presence of pitch canker disease. Phytopathology 102:S.

Reynolds, G., Gordon, T.R., and McRoberts, N. 2011. Systemic resistance phenomena from an evolutionary perspective. Phytopathology 101:S152.

Reynolds, G.J., MacRae, I.V., Windels, C.E., Sims, A., and Laguette, S. 2011. Remote sensing for detection of Rhizoctonia crown and root rot in sugar beet fields. Phytopathology 101:S153.

MacRae, I.V., Reynolds, G.J., Sims, A., Windels, C.E., and Laguette, S. 2011. Aerial imaging to assess Rhizoctonia crown and root rot severity in sugar beet fields. Proceedings from the 36th Biennial Meeting of the ASSBT, Albuquerque, NM.

Reynolds, G.J., Windels, C.E., MacRae, I.V., and Laguette, S. 2011. Remote sensing for assessing Rhizoctonia crown and root rot severity in sugar beet. Proceedings from the 36th Biennial Meeting of the ASSBT, Albuquerque, NM.

Reynolds, G.J., Windels, C.E., MacRae, I.V., and Laguette, S. 2009. Hyperspectral remote sensing for detection of Rhizoctonia crown and root rot in sugar beet. Phytopathology 99:S108.

Juzwik, J., Olszewski, S., Park, J.H., Reynolds, G., and Haugen, L. 2008. Assessment and etiology of hickory decline - Preliminary results. San Antonio Forest Health Monitoring Working Group Meeting Proceedings.

SOFTWARE EXPERIENCE:

Microsoft Office (Word, Excel, and PowerPoint), SAS, R, ERDAS Imagine, MapWindow GIS, ASD ViewSpecPro, Adobe Photoshop, ArcView GIS, Qiqqa, Simile, ShareBrain

COMMUNITY SERVICE:

Dog socialization, Humane Society of Polk County, Crookston, MN, 2009
Hessed House Homeless Shelter, Aurora, IL, 2006