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Education

North Carolina State University, Raleigh, NC – 8/06 – Present

Ph.D Student in Plant Pathology

Thesis: “ Biology and management of fairy rings on golf course putting greens.”

Anticipated Graduation Date: 1/2010

University of Georgia, Athens, GA – 8/99 – 12/01

Master of Science in Plant Pathology

Thesis: “ Sensitivity of *Sclerotinia homoeocarpa* isolates from Georgia to propiconazole and other DMI fungicides”

North Carolina State University, Raleigh, NC – 8/96 – 12/98

Bachelor of Science in Agronomy, Cum Laude

University of Hawaii, Honolulu, HI – 8/92 – 5/96

Grants & Awards

- **2009 Award: Crop Science Society of America – Div. C-5**
2nd Place Graduate Student Presentation
- **2008 Watson Fellowship Awardee**
Environmental Institute for Golf – Golf Course Superintendents Association of America
- **2007 GCSAA Chapter Cooperative Research Grant**
L.P. Tredway & G.L. Miller
“Biology and Management of Fairy Rings on Golf Course Putting Greens”
- **2007 Industry Award: Crop Science Society of America – Div. C-5**
Best Graduate Student Poster Presentation
“Isolation and identification of the basidiomycete fungi causing fairy rings in golf course putting greens”

Peer Reviewed Publications

- Miller, G.L, and Tredway, L.P. 2010. Identification and distribution of fungi associated with fairy rings on golf putting greens. *Plant Disease. In preparation*
- Miller, G.L, and Tredway, L.P. 2010. Evaluation of preventive fungicide applications for control of fairy rings on golf putting greens. *Plant Disease. In preparation*
- Miller, G.L., and Tredway, L.P., 2009. Selective amplification of fairy ring fungi from infested putting green soils. *International Turfgrass Research Society Journal*. 11:253-262.
- Miller, G. L., Stevenson, K. L., and Burpee, L. L. 2002. Sensitivity of *Sclerotinia homoeocarpa* isolates to propiconazole and impact on control of dollar spot. *Plant Disease*. 86:1240-1246.

Research Reports

- Miller, G.L., Soika, M.D., and Tredway, L.P., 2009. Evaluation of spring fungicide applications for preventative control of fairy ring caused by *Lycoperdon pusillum* on bermudagrass and creeping bentgrass putting greens, 2008. Plant Disease Management Reports (online). Report 3:T058. DOI:10.1094/PDMR03. The American Phytopathological Society, St. Paul, MN.
- Settle, D., Kane, R., and Miller, L., 2009. Evaluation of fungicides for preventive control of fairy ring on an annual bluegrass green in Chicago, 2006. Plant Disease Management Reports (online). Report 3:T031. DOI:10.1094/PDMR03. The American Phytopathological Society, St. Paul, MN.
- Miller, G.L., Soika, M.D., and Tredway, L.P., 2008. Evaluation of spring fungicide applications for preventative control of fairy ring, 2007. Plant Disease Management Reports (online). Report 2:T003. DOI:10.1094/PDMR02. The American Phytopathological Society, St. Paul, MN.
- Settle, D., Kane, R., and Miller, L., 2007. Fungicide application strategies for dollar spot control on a creeping bentgrass fairway, 2006. Plant Disease Management Reports (online). Report 1:T009. DOI:10.1094/PDMR01. The American Phytopathological Society, St. Paul, MN.
- Settle, D.M., Kane, R., and Miller, G.L., 2007. Evaluation of newer products for selective control of moss on creeping bentgrass greens. USGA Turfgrass and Environmental Research Online, March 1, 6(5): 1-8.
- Kane, R., and G.L. Miller, 2004. Control of dollar spot on a golf course fairway with a long history of fungicide resistance. Fungicide and Nematicide Tests (online). Report 60:T018. DOI:10.1094/FN60. The American Phytopathological Society, St. Paul, MN.
- Kane, R., and G.L. Miller, 2003. Field testing plant growth regulators and wetting agents for seedhead suppression of annual bluegrass. USGA Turfgrass and Environmental Research Online. April 1, 2(7): 1-9.

Abstracts

- Miller, G.L. and L. Tredway. 2009. Distribution of Basidiomycete Fungi Associated with Fairy Rings On Golf Putting Greens. ASA-CSSA-SSSA International Annual Meetings, Pittsburgh, PA, #174-7.
- Miller, G.L. and L. Tredway. 2009. Impact of application method on the efficacy of preventive applications of DMI fungicides for fairy ring control on golf putting greens. Phytopathology
- Miller, G.L. and L. Tredway. 2009. Optimal timing of preventative fungicide applications for fairy ring caused by *Vascellum pratense* in creeping bentgrass putting greens. Phytopathology. 99:S199.
- Miller, G.L. and L. Tredway. 2008. Isolation of fungi associated with fairy rings on golf putting greens and identification using analysis of the ITS1 and ITS2 rDNA regions. ASA-CSSA-SSSA International Annual Meetings, Houston, TX, #561-2.
- Miller, G.L. and L.P. Tredway. 2008. Phylogenetic analysis of the ITS1 and ITS2 rDNA regions of Lycoperdaceae associated with fairy rings on golf putting greens. Phytopathology. 98:S106.
- Miller, G.L. and L. Tredway. 2007. Preventative control of fairy ring associated with *Lycoperdon perlatum* in creeping bentgrass. ASA-CSSA-SSSA International Annual Meetings, New Orleans, LA, #265-1.
- Miller, G.L. and L. Tredway. 2007. Isolation and identification of the basidiomycete fungi causing fairy rings in golf course putting greens. ASA-CSSA-SSSA International Annual Meetings, New Orleans, LA, #74-7.

Abstracts (cont.)

- Miller, G.L. and L. Tredway. 2007. Preventative control of fairy ring caused by *Lycoperdon perlatum* in creeping bentgrass. *Phytopathology*. 97:S77.
- Miller, G.L. and L. Tredway. 2007. Isolation and identification of the basidiomycete fungi causing fairy rings on golf putting greens. *Phytopathology*. 97:S77.
- Miller, G.L., Stevenson, K.L., and Burpee, L.L. 2001. Sensitivity of Georgia populations of *Sclerotinia homoeocarpa* to propiconazole. *Phytopathology*. 91:S63.

Invited Research Presentations

- 2008 Mid-Atlantic States Mycology Conference: *Identification of Lycoperdaceae Associated with Fairy Rings using ITS regions 1 and 2*
- 2007 Bayer Research Workshop: *Biology & Management of Fairy Rings on Golf Greens*
- 2007 Mid-Atlantic States Mycology Conference: *Biology of Fairy Rings on Golf Putting Greens*

Extension Publications

- Miller, L. and L. Tredway. 2009. *Demystifying fairy rings on golf putting greens*. North Carolina Turfgrass. July/August: p. 14-19.
- Miller, L. and L. Tredway. 2009. *Isolation and Identification of Fungi Associated with Fairy Rings on Greens*. Cutting Edge - Golf Course Management. April: p. 124
- Miller, L. and L. Tredway. 2008. *Breaking the Curse of Fairy Rings on Putting Greens*. Carolinas Green. July/August: p. 20-24.
- Miller, L. and L. Tredway. 2008. *Fairy Rings: Simple Arcs, Complex Disease*. The Greenerside. Spring. 32(2): p. 32-33.
- Miller, L. and L. Tredway. 2008. NCSU Turffiles Alert: *Treat Your Rings in Spring*. TurfFiles: NCSU Web Site. March 27.
- Miller, L. 2006. *Preventive pest control: What it takes to be an early bird*. On Course. July. 60(2): p. 11-15.
- Miller, L. 2005. *Wetting agents – The old, the new, what they are and what they do*. On Course. September: 59(4): p. 19-21.
- Wilkinson, H.T., Kane, R.T., Miller, L., Pederson, D., Henning, S., 2005. *Diseases present in Illinois this season*. University of Illinois Turf and Nursery Field Day. p. 19.
- Kane, R. and L. Miller, 2004. *Research Roundup: CDGA's 2004 results*. On Course. December: 58(7): p. 11-15.
- Miller, L. 2004. *Intraseeding/Interseeding: What's the hullabaloo?* On Course. June: 58(1): p. 13-17.
- Kane, R., Miller, L., and Wilkinson, H. 2003. *Illinois pathology report: Anthracnose basal rot strikes bentgrass, and other news*. On Course. November: 57(6): p. 15-17.
- Miller, L. 2003. *Herbicide resistance issues: Not a common weed to hoe*. On Course. August: 57(3): p. 11-13.
- Authored or co-authored over 44 newsletters and 84 emailed pest reports within the Interactive Turf program between 2002 and 2005.

Extension Presentations

- 2009 Carolinas Golf Course Superintendents Conference: Half Day Seminar: *Turf Troubleshooting & Problem Diagnosis*
- 2009 Virginia Turfgrass Association September Meeting: *Battling Basidios: Combat Fairy Rings with Preemptive Strikes*
- 2009 Cape Fear Superintendents Association May Meeting: *Get Ahead of the Curve: Managing Fairy Rings on Greens.*
- 2009 Indiana Green Expo: *Current Research Report: Fairy Rings – Biology & Management.*
- 2009 Indiana Green Expo: *New Fungicide Roundup.*
- 2009 North Carolina Turfgrass Conference and Show: *Management & Prevention of Fairy Rings on Golf Putting Greens.*
- 2008 Carolinas Golf Course Superintendents Conference: *Fairy Ring Prevention & Management.*
- 2008 Sandhills Golf Course Superintendents Association July Meeting: *Fairy Ring: Controlling the Elves and Pixies in your Golf Greens.*
- 2008 Cape Fear Superintendents Association July Meeting: *Excising the Demons in Your Putting Greens.*
- 2008 Hawaii Superintendents Association Meeting: *Fairy Rings: Controlling UFOs (Unidentified Fungal Objects).*
- 2008 North Carolina Turfgrass Conference and Show: *New Developments in Managing Fairy Rings on Golf Putting Greens.*
- 2007 North Carolina State University Turfgrass Field Day: *Preventive Control of Fairy Ring in Golf Putting Greens.*
- 2007 Cape Fear Superintendents Association August Meeting: *Preventative control of fairy rings in creeping bentgrass.*
- 2005 Illinois Professional Turfgrass Conference: *\$ Spot: Should You Be an Early Bird?*
- 2005 Illinois Professional Turfgrass Conference: *Collecting and Using Weather Data to Predict Changes in Turf Growth and Pest Occurrences*
- 2004 Illinois Professional Turfgrass Conference: *Fungicide Resistance: Prevalent or Sporadic?*
- 2004 Northwest Illinois Golf Course Superintendents Meeting: *The Evolving CDGA Program*
- 2004 Illinois Arborist Association Meeting: *Turf and Trees in the Golf Landscape*
- 2004 Central Illinois Golf Course Superintendents Meeting: *Interactive Turf: Where Pest Management is Now... and Where IT is Going*
- 2002 and 2004 Chicagoland Association of Golf Course Superintendents Annual Forum: *Interactive Turf: Now and the Future.*

Teaching Experience

- **Principles of Plant Pathology (PP 315) – TA (Fall 2008)**
 - Lead assistant for the Distance Education portion of the course
 - Assisted with website content and delivery
 - Emailed and posted weekly reminders of course requirements to students
 - Moderated three on-line review sessions utilizing Elluminate™ software to provide a virtual blackboard and allow for student interaction
 - Assisted with lecture conversion of presentations

Teaching Experience (cont.)

- **Principles of Plant Pathology (PP 315) - TA (Fall 2008)**
 - On-campus Laboratory
 - Presented weekly introductory lectures in lab
 - Coordinated lab prep and setup with other TAs, technician, and faculty mentor
 - Assisted with development of laboratory notebook
 - Created and assisted with weekly lab quizzes and practicals
 - Mentored students on how to properly identify plant pathogens
- **Forest Pathology (PP 318) - TA (Spring 2008)**
 - Coordinated lab prep and setup with other TAs
 - Led class on two field trips around campus and through a forest demonstrating disease and its impact on the landscape
 - Moderated two review sessions for students - built lesson plans to assist students in understanding difficult terminology and concepts
- **Introductory Mycology (PATH 4200/6200) - TA (Spring 2000)**
 - Assisted with lab setup and specimen collection of various fungi
 - Moderated one review session - building lesson plans to assist students
 - Assisted with student field trip to demonstrate fungal interactions in the ecosystem
- **Introductory Plant Pathology (PATH 3530) - TA (FALL 1999)**
 - Coordinated lab setup with other TAs
 - Moderated two review sessions - built lesson plans to help students grasp difficult concepts and terminology
 - Assisted students with disease identification as part of a lab project
- **Undergraduate Mentoring - Fall 2008**
 - Directed Honors Research Project on use of β -tubulin locus for phylogenetic analysis of basidiomycetes causing fairy ring in turfgrasses.
- **Diseases of Ornamentals and Turfgrasses (PP055) - Spring 2009**
 - Completed the Instructional Technology Assistant Program
 - Assisted with development of course website - <http://www.courses.ncsu.edu/pp055>
- **Turfgrass Management (PGM 311) - 11/12/08**
 - *Turf Diseases: The Yin, The Yang, and The Yuck*
- **Diseases of Ornamentals and Turfgrasses (PP055) - 10/11/07**
 - Guest Lecture: *Dollar Spot, Fungicide Resistance, & Fairy Rings*

Professional Experience

North Carolina State University

Raleigh, NC

Ph.D. Candidate

July 2006 – Present

- Conducted research on the biology and management of fairy rings on golf putting greens
- Composed research papers, research presentations, and scientific journal publications
- Produced a promotional video highlighting the Plant Pathology department at North Carolina State University. Video utilized in meetings, mailings and on the departmental website - <http://www.cals.ncsu.edu/plantpath/>

Chicago District Golf Association

Lemont, IL

Manager of Turfgrass Research/

Interactive Turf Coordinator

February 2001 – July 2006

- Developed and maintained Interactive Turf – a web-based application (www.interactiveturf.com) that serves over 100 superintendents in Illinois. Interactive Turf is a weather-based pest forecasting system and regional resource for reports of current pest activity and management recommendations.
- Conducted field experiments and grant-in-aid trials designed to evaluate turfgrass cultivars (NTEP program) and the efficacy and application timing of pest control products.
- Provided diagnostic services to golf course superintendents in the Midwest, including on-site visits and lab analysis for biotic or abiotic problems.
- Assisted with the planning and grow-in of the golf course/turf research facility located at the Midwest Golf House.
- Presented research material at meetings for state and local turfgrass organizations.
- Wrote articles for peer-reviewed science publications and extension materials in several trade publications.

University of Georgia

Athens, GA

M.S. Graduate Research Assistant

August 1999 – December 2001

- Conducted research to evaluate the sensitivity of *Sclerotinia homoeocarpa* populations to DMI fungicides
- Composed research papers, research presentations, and scientific journal publications
- Taught the fundamental principles of Introductory Plant Pathology to undergraduate students through laboratory exercises and coursework

BASF Corporation

Raleigh, NC

Intern–Fungicide Development/Biology

April 1998 – August 1999

- Assisted with the biological development of future commercial fungicides
- Gained experience in scientific methodology for evaluation of plant pathogens
- Primary responsibilities included preparation, treatment application, and evaluation of fungicide efficacy trials

Professional Experience (cont.)

East Lake Golf Club

Atlanta, GA

Student Intern

April 1997 – September 1997

- Assisted in preparation of golf course for various tournaments during the summer season
- Assisted in the long-term preparation for the 1998 Tournament Championship
- Supervised small work crews
- Trained new employees

Navy-Marine Golf Course

Honolulu, HI

Irrigation Technician

November 1992 – April 1997

- Developed and implemented programs for the daily irrigation of golf course
- Assisted in the programming and operation of Toro Network 8000 satellite irrigation controllers
- Repaired and installed various sprinkler heads and irrigation accessories

Leadership & Achievements

- President of North Carolina State University Plant Pathology Graduate Student Association: 2007/2008
- Moderator of Technical Session of 2009 APS Annual Meeting: Chemical Control
- Attended and completed the Real-Time PCR Workshop for Applied Plant Pathologists held at the University of Kentucky (January 2009)
- Represented department at 2009 North Carolina State University Graduate Research Symposium – Poster: *Isolation and identification of basidiomycete fungi associated with fairy rings in golf putting greens*
- Department representative at 2008 CALS Alumni Tailgate
- Selected and attended the 2008 North Carolina State University Graduate Student Professional Development Workshop
- Co-Chair of the Education Committee for the 2005 Illinois Professional Turfgrass Conference.

Affiliations

- American Phytopathological Society: Turfgrass Pathology Committee
- Crop Science Society of America: C-5 division
- Mycological Society of America
- Golf Course Superintendents Association of America
- Carolinas Golf Course Superintendents Association
- Turf Council of North Carolina
- Gamma Sigma Delta Agricultural Honor Society