


**LORI GIGET ECKHARDT**  
School of Forestry and Wildlife Sciences  
Auburn University, AL 36849-5418  
(334)844-2720 or (334)844-1058  
[eckhalg@auburn.edu](mailto:eckhalg@auburn.edu)

- 
- 7/16 to present **Associate Director**, Southern Region, SIGMA XI
- 8/15 to present **Professor**, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, AUBURN UNIVERSITY, Auburn, AL.
- 10/15 to present **Coordinator**, IUFRO Working Group WP 7.02.06 Disease/Environment Interactions in Forest Decline, Research Group RG 7.02.00 Pathology, IUFRO Division 7
- 7/12 to 08/15 **Associate Professor**, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, AUBURN UNIVERSITY, Auburn, AL.
- 6/11 to present Joint appointment Department of Entomology and Plant Pathology, AUBURN UNIVERSITY, Auburn, AL.
- 10/10 to present **Co-Director**, State Sudden Oak Death Laboratory for AL & MS, AUBURN UNIVERSITY, Auburn, AL.
- 8/10 to 06/12 **Associate Research Professor**, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, AUBURN UNIVERSITY, Auburn, AL.
- 10/08 to present **Director**, Forest Health Cooperative (AUFHC), AUBURN UNIVERSITY, Auburn, AL.
- 7/05 to 8/10 **Assistant Research Professor**, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, AUBURN UNIVERSITY, Auburn, AL.
- 07/05 to 7/10 **Adjunct Assistant Professor**, Louisiana State University Agricultural Center, Department of Plant Pathology and Crop Physiology, LOUISIANA STATE UNIVERSITY, Baton Rouge, LA.
- 1/04 - 7/05 **Postdoctoral Researcher**, Forest Pathology/Forest Entomology, Louisiana State University Agricultural Center, Department of Plant Pathology and Crop Physiology, LOUISIANA STATE UNIVERSITY, Baton Rouge, LA.
- 06/03 - 12/03 **Plant Pathologist**, Forest Pathology/Forest Entomology, Contracted by UNITED STATES FOREST SERVICE through Contract Consultants and stationed at Louisiana State University Agricultural Center, Department of Plant Pathology and Crop Physiology, Louisiana State University, Baton Rouge, LA.
- 08/99 - 07/03 **Graduate Research Associate**, LOUISIANA STATE UNIVERSITY, Baton Rouge, LA.  
Major Field: Forest Pathology  
Minor Field: Forest Entomology  
Ph.D. topic: Biology and ecology of *Leptographium* species and their vectors as components of loblolly pine decline.

- 08/00 - 06/03 ***Volunteer (Pathology and Entomology)***, UNITED STATES DEPARTMENT OF AGRICULTURE, UNITED STATES FOREST SERVICE, FOREST HEALTH PROTECTION, Pineville, LA
- 05/97 - 06/99 ***Research Assistant***, Molecular Virology, UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, College Park, MD
- 08/96 -05/97 ***Howard Hughes Undergraduate Research Fellow***, UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, College Park, MD
- 05/96 - 08/96 ***Research Assistant***, Molecular Virology, UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE, College Park, MD

#### **TEACHING EXPERIENCE:**

***Professor***, Fall 2015, 2016  
AUBURN UNIVERSITY, Auburn, AL  
Courses: Forest Health, Forest Health Lab

***Professor***, Spring 2016  
AUBURN UNIVERSITY, Auburn, AL  
Courses: Graduate Seminar

***Associate Professor***, Spring 2014, 2015  
AUBURN UNIVERSITY, Auburn, AL  
Courses: Graduate Seminar

***Associate Professor***, Fall 2010, 2011, 2012, 2013, 2014  
AUBURN UNIVERSITY, Auburn, AL  
Courses: Forest Health, Forest Health Lab

***Assistant Professor***, Fall 2006, 2007, 2008, 2009  
AUBURN UNIVERSITY, Auburn, AL  
Courses: Forest Health, Forest Health Lab

***Guest Lecturer***, Fall 2005  
AUBURN UNIVERSITY, Auburn, AL  
Courses: Forest Health

***Lecturer***, Fall 2004, Spring 2005  
LOUISIANA STATE UNIVERSITY, Baton Rouge, LA  
Course: Science and Society

***Lab Instructor***, Fall 2003, 2004  
LOUISIANA STATE UNIVERSITY, Baton Rouge, LA  
Courses: Forest Insects and Diseases, Introductory Mycology (2003 only)

***Guest Lecturer***, (1999), 2000, 2001, 2002, 2003, 2004, 2005, 2010  
LOUISIANA STATE UNIVERSITY, Baton Rouge, LA  
Courses: Forest Insects and Diseases, Introductory Mycology, Professionalism in the Plant Sciences  
(*Course Co-creator and co-initiator*), Applied Ecology

***Teaching Assistant***, Fall 1999, 2000, 2001, 2002, 2003,

LOUISIANA STATE UNIVERSITY, Baton Rouge, LA  
 Courses: Forest Insects and Diseases, Introductory Mycology (2001, 2003 only)

*Undergraduate Teaching Assistant*, Fall 1996  
 UNIVERSITY OF MARYLAND, College Park, MD  
 Course: Cell Biology and Physiology

# STUDENT/SCIENTIST TRAINING:

## *Graduate Students (work completed)*

Name	Involvement (Comm Member or MP)	Degree	Year	Position Now Held
Keshia Collins	Comm Member	MS	2004	USFS Forester
Roger Menard	Co-MP	MS	2007	USFS-FHP Plant Pathologist
James Zanzot	Co-MP	PhD	2009	Senior Lecturer Auburn University
George Matusick	MP	PhD	2010	Research Project Leader – The Nature Conservancy
Jacob Thompson	MP	MS	2011	PhD Student
Johnathan Walls	Comm Member	MS	2011	Wildlife Biologist – USDA APHIS Wildlife Service
Yuan Zeng	MP	MS	2012	PhD Student – AU-EPP
Sallie Martin	Comm Member	MS	2012	Entomologist
Matt Meyerpeter	MP	MS	2012	Fiber Procurement Specialist - International Paper
Amritpal Singh	MP	MS	2013	PhD Student – University of Minnesota
Ben Brunson	MP	MS	2013	Forester – The St. Joe Company
Carlos Rodas	External International Examiner*	PhD	2013	Research Forester – Department of Forestry Columbia
Znar Barwary	Outside Reader	PhD	2014	Postdoctoral Fellow – Virginia Tech
Jeffrey Cheippa	Co-MP	MS	2015	PhD Student – Hawksberry Institute in the Environment, Sydney Australia
Adam Trautwig	MP	MS	2015	PhD student – University of Massachusetts, Amherst
Anya Martina Reid	External International Examiner**	PhD	2016	Postdoctoral Fellow

\*External International Examiner – reviews thesis/dissertation, writes review, attends defense and acts as main examiner (University of Pretoria, South Africa).

\*\*External International Examiner – reviews thesis/dissertation, writes review, writes defense questions (The University of British Columbia, Vancouver, Canada).

## *Graduate Students (currently active)*

<b>Name</b>	<b>Involvement (Comm Member or MP)</b>	<b>Degree</b>	<b>Year (expected)</b>
Tessa Bauman*	Co-MP	PhD	2017
Gifty Acquash	Comm Member	PhD	2016
Charles Essien	Comm Member	PhD	2017
Pratima Devkota	MP	PhD	2017
Andrea Cole	MP	MS	2017
Shrijana Duwadi	MP	MS	2019
John Mensah	MP	PhD	2020
Jessica Ahl	MP	MS	2018

\*Student registered at University of Pretoria, South Africa

*Honors and Awards of Undergraduate and Graduate Students I Direct or Co-Direct*

- 2016 Pratima Devkota – Graduate Student Thesis/Dissertation Fellowship, Graduate School, Auburn University (\$500)
- 2016 Jessica Ahl – Westervelt Fellowship, School of Forestry and Wildlife Sciences, Auburn University (\$2,400 per year for 2 years)
- 2016 Jordan Heath – Science Award, School of Forestry and Wildlife Sciences, Auburn University
- 2016 John Mensah – CAFS (Center for Advanced Forest Systems) Meeting Scholarship (\$325 for meeting registration plus hotel accommodations for 4 nights)
- 2016 Andrea Cole – Travel Grant, College of Agriculture (\$750)
- 2016 Adam Trautwig – Dukes Award in Biological Sciences, School of Forestry and Wildlife Sciences, Auburn University (\$750)
- 2016 Pratima Devkota – 1<sup>st</sup> Place Student Poster Award, SE – Society of American Foresters, Auburn, AL (\$100)
- 2016 Charles Essen – 2<sup>nd</sup> Place Student Poster Award, SE – Society of American Foresters, Auburn, AL (\$50)
- 2015 Gifty Acquah – Sigma Xi Superior Presentation Medal, Sigma Xi’s Annual Meeting and Student Research Conference, Kansas, Missouri
- 2015 Jeff Chieppa – Master’s Thesis Award for Biology and Life Sciences, Auburn University (\$500)
- 2015 Adam Trautwig – Graduate Student Thesis/Dissertation Fellowship, Graduate School, Auburn University (\$500)
- 2015 Pratima Devkota – Graduate Student Thesis/Dissertation Fellowship, Graduate School, Auburn University (\$500)
- 2015 Pratima Devkota – 1<sup>st</sup> Place Student Poster Award, Graduate Student Seminar Poster Competition, Auburn University

- 2015 Pratima Devkota – Drummond Fellowship, Top International Student, School of Forestry and Wildlife Sciences, Auburn University (\$1,000)
- 2015 Jeff Chieppa, Adam Trautwig – Inducted into Gamma Sigma Delta the Honor Society of Agriculture
- 2015 Pratima Devkota – 1<sup>st</sup> Place Student Poster Award, Biennial Southern Silviculture Research Conference, Knoxville, TN (\$150)
- 2015 Adam Trautwig – CAFS (Center for Advanced Forest Systems) Meeting Scholarship (\$325 for meeting registration plus hotel accommodations for 4 nights)
- 2015 Jeffery Chieppa – Drummond Fellowship for the School of Forestry and Wildlife Sciences Nominee Top 10 MS Graduate Student for Auburn University (\$2,000)
- 2015 Jeffrey Chieppa – Outstanding MS Student Award, School of Forestry and Wildlife Sciences, Auburn University
- 2015 Gifty Acquah – Kykenkee Endowed Fellowship for Outstanding Graduate Student in Hardwood Research, School of Forestry and Wildlife Sciences, Auburn University (\$1000)
- 2015 Jeffery Chieppa – 1<sup>st</sup> Place Student Poster Award, SE – Society of American Foresters, St. Simons Island, GA (\$100)
- 2015 Pratima Devkota – 2<sup>nd</sup> Place Student Poster Award, SE – Society of American Foresters, St. Simons Island, GA (\$50)
- 2014 Jeffery Chieppa – The NAUFRP and IUFRO World Congress Registration Scholarship Program (\$150)
- 2014 Gifty Acquah – 1<sup>st</sup> Place Student Poster Award, 68<sup>th</sup> Forest Products Convention, Quebec City, Canada
- 2014 Jeffery Chieppa – CAFS (Center for Advanced Forest Systems) Meeting Scholarship (\$325 for meeting registration plus hotel accommodations for 4 nights)
- 2014 Jeffery Chieppa, Adam Trautwig and Gifty Acquah – Placed in the top 10% for oral presentations at the Graduate Research Forum to advance to Research Week 2014
- 2014 Tessa Bauman – 1<sup>st</sup> Place Student Poster Award, SE – Society of American Foresters, Mobile AL (\$100)
- 2013 Andy Gougherty – Graduate Student Travel Grant, American Phytopathological Society (\$1,000)
- 2013 Gifty Acquah – 2<sup>nd</sup> Place Student Poster Award, IGERT: Workshop on Energy, Transportation, and Water Infrastructure: Policy and Social Perspectives, Ames, IA
- 2013 Ben Brunson – 1<sup>st</sup> Place Student Poster Award, SE – Society of American Foresters, Mobile AL (\$100)
- 2013 Amritpal Singh – 2<sup>nd</sup> Place Student Poster Award, SE – Society of American Foresters, Mobile AL (\$50)

- 2012 Andy Gougherty – Westervelt Fellowship, School of Forestry and Wildlife Sciences, Auburn University (\$2,400 per year for 3 years)
- 2012 Ben Brunson – 1<sup>st</sup> Place Student Poster Award, SE – Society of American Foresters, Jekyll Island GA (\$100)
- 2012 Amritpal Singh – 2<sup>nd</sup> Place Student Poster Award, SE – Society of American Foresters, Jekyll Island GA (\$50)
- 2012 Yuan Zeng – Drummond Fellowship for the School of Forestry and Wildlife Sciences Nominee Top 10 MS Graduate Student for Auburn University (\$2,000)
- 2012 Yuan Zeng – Outstanding MS Student Award, School of Forestry and Wildlife Sciences, Auburn University
- 2012 Yuan Zeng – James Floyd Goggans’ Endowed Fellowship for Outstanding Graduate Student in Forest Biology, School of Forestry and Wildlife Sciences, Auburn University (\$750)
- 2011 Yuan Zeng, Matthew Meyerpeter, Amritpal Singh – Inducted into Gamma Sigma Delta the Honor Society of Agriculture
- 2011 Matthew Meyerpeter – Inducted into Delta Epsilon Iota the Academic Honor Society
- 2011 George Matusick – Distinguished Dissertation for Biology and Life Sciences, Auburn University (\$500)
- 2011 Matthew Meyerpeter – York Scholarship for International travel and research, Auburn University (\$5,000)
- 2011 George Matusick – Outstanding Forest Pathology Research Paper, South-wide Forest Disease Workshop
- 2010 George Matusick – Drummond Fellowship for the School of Forestry and Wildlife Sciences Nominee Top 10 Ph.D. Graduate Student for the Auburn University (\$2,000)
- 2010 George Matusick – Graduate Student Travel Grant, American Phytopathological Society (\$1,000)
- 2009 George Matusick – Outstanding Ph.D. Student Award, School of Forestry and Wildlife Sciences, Auburn University
- 2009 James Zanzot – Graduate Student Travel Grant, American Phytopathological Society (\$1,000)
- 2009 David Walker – Undergraduate Competitive Research Fellowship, Auburn University (\$5,600)
- 2008 George Matusick – James Floyd Goggans’ Endowed Fellowship for Outstanding Graduate Student in Forest Biology, School of Forestry and Wildlife Sciences, Auburn University (\$750)

- 2008 George Matusick – Best Student Paper Award, South-wide Forest Disease Workshop, Savannah, GA (\$100)
- 2008 George Matusick – 2<sup>nd</sup> Place Student Poster Award, Southeastern Society of American Foresters, Calloway Gardens, GA
- 2008 James Zanzot –Grants-in-Aid Research Grant, Sigma Xi (\$1,000)
- 2007 Jacob Thompson – Westervelt Fellowship, School of Forestry and Wildlife Sciences, Auburn University (\$2,400 per year for 3 years)
- 2006 James Zanzot – Best Student Paper Award, South-wide Forest Disease Workshop, Ashville, NC (\$100)
- 2005 James Zanzot - Westervelt Fellowship, School of Forestry and Wildlife Sciences, Auburn University (\$2,400 per year for 3 years)

## **OTHER CONTRIBUTIONS TO TEACHING AND RESEARCH MENTORING**

### ***Visiting Scientists***

Dr. Rosine Hall, 2015-2016, AUM, Montgomery, AL (Sabbatical)  
 Dr. Ryan Nadel, 2012, Institute for Commercial Forestry Research, South Africa  
 Dr. Mike Wingfield, 2012, FABI, University of Pretoria, South Africa

### ***Postdoctoral Fellows***

Dr. Ryan Nedel, 2014-2016, Auburn University, AL

### ***Visiting Graduate Students***

Kevin Chase, 2011, Mississippi State University, MS  
 Tessa Bauman, 2009, Louisiana State University, LA  
 Inga McLaughlin, 2007, Clemson University, SC

### ***Undergraduate Research Fellows***

David Walker, 2009-2010, Auburn University, AL  
 Kelly Thornton, 2004-2005, Louisiana State University, LA  
 Frank Anderson, 2004-2005, Louisiana State University, LA

### ***Undergraduate Student Researchers***

Cayde Thomas, 2016, Auburn University, AL  
 Nick Yashko, 2015-2016, Auburn University, AL  
 Jordan Heath, 2015-2016, Auburn University, AL  
 Wilson Strickland, 2015, Auburn University, AL  
 Chase Seals, 2015, Auburn University, AL  
 Cody Hartzog, 2014-2016, Auburn University, AL  
 Caleb Killough, 2014-2015, Auburn University, AL  
 Cora Yates, 2014, Auburn University, AL  
 Dustin Morgan, 2014, Auburn University, AL  
 Matthew Fennema, 2013-2014, Auburn University, AL

Ashton Newman, 2013-2016, Auburn University, AL  
 Elizabeth Hedgepath, 2012, Auburn University, AL  
 Alex Hedgepath, 2012, Auburn University, AL  
 Seth Hunt, 2011-2013, Auburn University, AL  
 Andrew Henderson, 2011, Auburn University, AL  
 Cedric Frazer, 2010-2011, Auburn University, AL  
 Della Stabler, 2008-2010, Southern Union, AL  
 David Walker, 2008-2009, Auburn University, AL  
 Daniel Fogg, 2008, Auburn University, AL  
 Josh Danzy, 2005-2006, Louisiana State University, LA  
 Tomas Rush, 2004-2005, Louisiana State University, LA  
 Kelly Thornton, 2004, Louisiana State University, LA  
 Christian Danna, 2004, Louisiana State University, LA

### ***Undergraduate Student Summer Research Interns***

Wilson Strictland, 2015, Auburn University, AL  
 Cora Yates, 2014, Auburn University, AL  
 Justin West, 2010, State University of New York, NY  
 Josh Danzy, 2005, Louisiana State University, LA  
 Dee Glass, 2004, Southern University, LA

### ***High School Student Researchers***

Della Stabler, 2007-2008, Home Schooled  
 Samantha Murray, 2006, Auburn High School, AL  
 Josh Danzy, B.S. 2003-2004, Pineville High School, LA  
 Tomas Rush, B.S. 2003-2004, Catholic High School, LA

## **EDUCATION:**

Ph.D., Plant Health and Entomology, Louisiana State University, Baton Rouge, LA, 2003.  
 B.S., Cell, Molecular Biology and Genetics, University of Maryland, College Park, MD, 1997.

## **PUBLICATIONS:**

### ***Books/Book Chapters*** (†Invited)

† Eckhardt, L.G. (*Submitted*) Loblolly Pine Decline (sidebar, Chapter X). In: (eds.) *The Conifer Compendium*. American Phytopathological Society Press, USA. Contribution = 100%

†Eckhardt, L.G. and Menard, R.D. **2013**. Pine decline in the southeastern United States and the involvement of bark beetles and Ophiostomatoid fungi. In: Siefert, K., Wingfield, M. and de Beer, W. (eds.) *The Ophiostomatoid Fungi: Expanding Frontiers*. American Phytopathological Society Press, USA. Contribution = 80%

† Eckhardt, L.G. **2013**. Black stain root diseases and other *Leptographium* diseases. In: Nicolotti G. and Gonthier P. (eds.) *Infectious Forest Diseases*. CABI Book. Contribution = 100%

† Eckhardt, L.G. **2010**. Loblolly pine decline (sidebar, Chapter 12). In: McNabb, K. and Gjerstad, D., (eds.) *Managing forests on private lands in Alabama and the Southeast*. Sweetwater Press/Alabama Forestry Foundation. Contribution = 100%.



*Refereed Journal Articles (\*\*Undergraduate or \*Graduate Student)*

- Wang, X., Liu, J., Kong, D., Du, W., Li, H., Zhou, D., Hse, C., Shupe, T., Eckhardt, L., and Zhao, K. (Submitted) Isolation, purification, and identification of prodigiosin from *Serratia marcescens* isolated from *Chamaecyparis lawsoniana* and its biological potential as an anticancer agent. J. Biosci. Bioeng. 00:000-000.
- \*Trautwig, A. Eckhardt, L.G., Hoeksema, J., Carter, E.A., and Loewenstein, N. (Accepted) Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. For. Sci. 00:000-000.
- Matusick, G., \*Walker, D., \*Hossain, M., Nadel, R.L., and Eckhardt, L.G. **2016**. Comparative behavior of root disease pathogens in stems and roots of *Pinus* species. Fungal Biology. Published first online: DOI: 10.1016/j.funbio.2015.12.007. Contribution = 20%
- \*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of tropospheric ozone on loblolly pine seedlings inoculated with root infecting ophiostomatoid fungi. Environ. Poll. 207: 130-137.
- Beach, J., Uertz, J., and Eckhardt, L. **2015**. Hyperspectral interferometry: sizing micro-scale surface features in the pine bark beetle. Microscopy Research and Techniques Published online first: DOI: 10.1002/jemt22550.
- \*Acquah, G.E., Via, B.K., Fasina, O. and Eckhardt, L.G. **2015**. Nondestructive estimation of forest biomass properties for bioenergy, fuels and chemical applications using near infrared spectroscopy (NIRS). J. Near Infr. Spec. Published online first: doi: 10.1255/jnirs.1153.
- \*Sells, S.M., Held, D., Enloe, S., Loewenstein, N., and Eckhardt, L. **2015**. Impact of cogongrass management strategies on generalist predators in longleaf pine stands. Pest Mgmt. Sci. 71:478-484.
- Via, B.K., Zhou, C., Acquah, G., Jiang, W., and Eckhardt, L. **2014**. Near infrared spectroscopy calibration for wood chemistry: which chemometric technique is best for prediction and interpretation? Sensors. 14:13532-13547.
- Riggins, J.J., Little, N.S., and Eckhardt, L.G. **2014**. Correlation between infection by ophiostomatoid fungi and the presence of eastern subterranean termite (*Reticulitermes* spp.) in loblolly pine (*Pinus taeda*) roots. Agric For Entol. 16:260-264.
- \*Duong, T.A., de Beer, Z.W., Wingfield, B.D., Eckhardt, L.G., and Wingfield, M.J. **2014**. Microsatellite and mating-type markers reveal unexpected patterns of genetic diversity in the pine root-infecting fungus *Grosmannia alacris*. Phytopathology 64:235-242.
- \*Singh, A., Anderson, D., and Eckhardt, L.G. **2014**. Variation in resistance of loblolly pine (*Pinus taeda* L.) families against *Leptographium* and *Grosmannia* root fungi. For. Path.44:293-298.
- Enloe, S.F., Loewenstein, N.J., Held, D.W., Eckhardt, L.G., and Lauer, D.K. **2014**. Impacts of prescribed fire, glyphosate, and seeding on cogongrass, species richness and species diversity in longleaf pine. Invasive Plant Science and Management. 6:536-544.
- \*Zeng, Y., Kidd, R., and Eckhardt, L.G. **2013**. The Effect of thinning and clear-cut on changes in the relative abundance of root-feeding beetle (Coleoptera: Curculionidae) in *Pinus taeda* plantations in Central Alabama and Georgia. Pest Manag. Sci. 70:915-921.

- \*Matusick, G., Menard, R.D., Zeng, Y., and Eckhardt, L.G. **2013**. Root-inhabiting bark beetles (Coleoptera: Curculionidae) and their fungal associates breeding in dying loblolly pine in Alabama. *Florida Entomologist*. March: 238-241.
- \*Walls, J.G., Hepp, G.R., and Eckhardt, L.G. **2012**. Onset of incubation and nest reuse: effects on microbial growth and viability of wood duck eggs. *The Condor*. 114:720-725.
- \*Matusick, G., Somers, G., and Eckhardt, L.G. **2012**. Root lesions in large loblolly pine (*Pinus taeda* L.) following inoculation with four root-inhabiting ophiostomatoid fungi. *For. Path.* 42: 37-43.
- \*Walls, J.G., Hepp, G.R., and Eckhardt, L.G. **2011**. Effects of incubation delay on viability and microbial growth on wood duck eggs. *The Auk*. 128:663-670.
- \*Matusick, G., Eckhardt, L.G., and Somers, G. **2010**. The pathogenicity of four *Leptographium* species to mature longleaf pine roots. *For. Ecol. Mgmt.* 260:2189-2195.
- \*Matusick, G. and Eckhardt, L.G. **2010**. Variation in virulence among four root-inhabiting ophiostomatoid fungi on *Pinus taeda* L., *P. palustris* Mill., and *P. elliottii* Englem. seedlings. *Can. J. Plant Path.* 32:361-367.
- \*Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. **2010**. A new *Ophiostoma* species from loblolly pine roots in the southeastern United States. *Mycol. Progress.* 9:447-457.
- \*Matusick, G. and Eckhardt, L.G. **2010**. The pathogenicity and virulence of four ophiostomatoid fungi on young longleaf pine trees. *Can. J. Plant Path.* 32:170-176.
- \*Zanzot, J.W., Matusick, G., and Eckhardt, L.G. **2010**. Activity of root-feeding insects and their associated fungi on longleaf pine in Georgia. *J. Econ. Entomol.* 39:415-423.
- Eckhardt, L.G., Menard, R.D., and Gray, E. **2009**. Effects of oleoresins and terpenoids on the fungal growth associated with pine decline in the southeastern United States. *For. Path.* 39:157-167.
- \*Matusick, G., Eckhardt, L.G., and Enebak, S.A. **2008**. Pathogenicity of *Leptographium serpens* to longleaf pine seedlings under various moisture regimes. *Plant Dis.* 92:1574-1576.
- Eckhardt, L.G. and Menard, R.D. **2008**. Topographic features associated with loblolly pine decline in central Alabama. *For. Ecol. Mgmt.* 255:1735-1739.
- Via, B.K., So, C.L., Eckhardt, L.G., Shupe, T.F., Stine, M., and Groom, L. **2008**. Response of near infrared diffuse reflectance spectra to blue stain and wood age. *J. Near Infr. Spec.* 16:71-74.
- Eckhardt, L.G., Weber, A.M., Menard, R.D., Jones, J.P., and Hess, N.J. **2007**. Association of an insect-fungal complex with loblolly pine decline in central Alabama. *For. Sci.* 53:84-92.
- Via, B.K., Eckhardt, L.G., So, C.L., Shupe, T.F., Stine, M., Groom, L., and Roberds, J.H. **2006**. The sensitivity of near infrared spectroscopy to two blue staining fungi. *Wood Fiber Sci* 38:717-726.
- Jacobs, K., Eckhardt, L.G., and Wingfield, M.J. **2006**. *Leptographium profanum* sp. nov., a new species from hardwood in North America. *Can. J. Bot.* 84:759-766.
- Via, B.K., So, C.L., Shupe, T.F., Eckhardt, L.G., Stine, M., and Groom, L. **2005**. Prediction of wood mechanical and chemical properties in the presence and absence of blue stain using two infrared instruments. *J. Near Infr. Spec.* 13: 201-212.

Eckhardt, L.G., Jones, J.P. and Klepzig, K.D. **2004**. Pathogenicity of *Leptographium* species associated with loblolly pine decline. *Plant Dis.* 88: 1174-1178.

Eckhardt, L.G., Goyer, R.A., Klepzig, K.D., and Jones, J.P. **2004**. Interactions of *Hylastes* species (Coleoptera:Scolytidae) with *Leptographium* species associated with loblolly pine decline. *J. Econ. Entomol.* 97: 468-474.

Eckhardt, L.G. **2003**. Biology and ecology of *Leptographium* species and their vectors as components of loblolly pine decline. Ph.D. Dissertation, Louisiana State University, Baton Rouge, LA.

Goregaoker, S.P., Eckhardt, L.G., and Culver, J.N. **2000**. Tobacco mosaic virus replicase-mediated cross-protection: contributions of RNA and protein-derived mechanisms. *Virology* 273: 267-275

*Refereed Proceedings and Professionally Reviewed Publications*

Eckhardt, L. and Steury, T. **2012**. Root diseases and timber dogs. *Forestry Source*. May 2012 Vol. 17, No. 5, p. 13.

Eckhardt, L. and Steury, T. **2011**. Root diseases and timber dogs. *Silviculture Magazine*. Fall 2011, p. 30-31.

Eckhardt, L.G., Sword-Sayer, M.A., and Imm, D.W. **2010**. State of pine decline in the southern United States: A Technical Note. *J. Appl. For.* 34:138-141.

Eckhardt, L.G. and Menard, R.D. **2009**. Declining loblolly pine stands: symptoms, causes and management options. *AL Treasured Forest Magazine* Volume XXV111, No. 2, p. 10-12.

Eckhardt, L.G., Sword-Sayer, M.A., and Imm, D.W. **2008**. What is pine decline in the southern United States and how wide spread is it? White Paper, [http://www.esa.org/science\\_resources/forest\\_health\\_workshop.php](http://www.esa.org/science_resources/forest_health_workshop.php)

Eckhardt, L.G. **2002**. *Leptographium* species: tree pathogens, insect associates, and agents of blue-stain: a review. *For. Sci.* 48:790.

Jones, J.P., Sun, X., Eckhardt, L., Weber, A., Hess, N., Barnett, J., and McGilvory, J. **2002**. Longleaf seedling production: some problems and their solutions. *La Agri.* 45:4-6.

*Non-refereed Proceedings, Papers and Reports (\*\*Undergraduate or \*Graduate Student)*

Sayer, M.A.S., Tyree, M.C. Blazier, M.A., Sung, S.S., and Eckhardt, L.G. **2016**. Is natural defense capacity correlated to allocation of dry mass to the stem in loblolly pine? In: Schweitzer, C.J.; Clatterbuck, W.K.; Oswalt, C.M., eds. 2016. Proceedings of the 18th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-212. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 614 p.

Eckhardt, L.G., Matusick, G., Menard, R.D., and Ditchkoff, S.S. **2016**. Three new ophiostomatoid species isolated from soil on snouts of wild pigs damaging pine roots in Georgia. In: Schweitzer, C.J.; Clatterbuck, W.K.; Oswalt, C.M., eds. 2016. Proceedings of the 18th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-212. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 614 p.

\*Acquah, G., Via, B.K., and Eckhardt, L.G. **2016.** Nondestructive estimation of the chemical and thermal properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. In: Schweitzer, C.J.; Clatterbuck, W.K.; Oswald, C.M., eds. 2016. Proceedings of the 18th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-212. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 614 p.

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2016.** Effects of elevated tropospheric ozone and altered irrigation regimes on loblolly pine seedlings inoculated with ophiostomatoid fungi. In: Oswald, Christopher, ed. 2014. Schweitzer, C.J.; Clatterbuck, W.K.; Oswald, C.M., eds. 2016. Proceedings of the 18th biennial southern silvicultural research conference. e-Gen. Tech. Rep. SRS-212. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 614 p.

Chappelka, A.H., Eckhardt, L.G., and Chieppa, J. **2014.** Interactions of future climate change scenarios of elevated tropospheric ozone with loblolly pine decline. Proceedings of the Western Forest Pathology Workshop.

Eckhardt, L. and Matusick, G. **2012.** Variation in pathogenicity and virulence of four ophiostomatoid fungi and *Heterobasidion* irregular in *Pinus taeda* and *Pinus elliottii*. P. 146. in Proceedings of the 13<sup>th</sup> International Conference of the IUFRO Working Party 7.02.01, September 4-10, 2011 Firenze Italy on Root and Butt Rot of Forest Trees, Capretti, P., Comparini, C., Garelotto, M., La Porta, M. (eds), University Press, Firenze.

Menard, R., Eckhardt, L., and Hess, N. **2011.** Assessment of loblolly Pine on Fort Benning Military Reservation, Fort Benning, GA. In: Stanturf, John A., ed. 2010. Proceedings of the 14th biennial southern silvicultural research conference. Gen. Tech. Rep. SRS-121. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 301-306.

Menard, R., Eckhardt, L., and Hess, N., **2006.** Assessment of loblolly Pine on Fort Benning Military Reservation, Fort Benning, Georgia. Report No. 2006-02-01. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Hess, N., Eckhardt, L., Menard, R., and Goddard, A. **2005.** Assessment of loblolly pine decline on the Shoal Creek and Talladega Ranger Districts, Talladega National Forest, Alabama. (Revised) Report No. 2005-08-04. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Hess, N., Eckhardt, L., Menard, R., and Goddard, A. **2005.** Assessment of loblolly pine decline on the Oakmulgee Ranger District, Talladega National Forest, Alabama. Report No. 2005-02-04. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Smith, M.O., Hess, N. J., Gulik, S., Jr., Eckhardt, L.G., and Menard, R.D. **2004.** Use of aerial hyperspectral imaging for monitoring forest health. Gen. Tech. Rep. SRS-71. Proceedings of the 12th biennial southern silvicultural research conference. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. pp. 166-168.

Eckhardt, L., Hess, N., Menard, R., and Goddard, A. **2004.** Assessment of loblolly pine decline on the Ranger Districts, Talladega National Forest, Alabama. Report No. 2004-02-01. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Hess, N., Eckhardt, L., Menard, R., and Goddard, A. **2003.** Assessment of loblolly pine decline on the Shoal Creek and Talladega Ranger Districts, Talladega National Forest, Alabama. Report No. 2003-02-04. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Hess, N., Eckhardt, L., Menard, R., and Goddard, A. **2003**. Assessment of loblolly pine decline on the Oakmulgee Ranger District, Talladega National Forest, Alabama. Report No. 2003-02-02. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Haley, T., Bruce, B., Danzy, J., Eckhardt, L., Menard, R., Oliveria, F., and Steiner, C. **2002**. Forest health evaluation of southern pine beetle on the Nation Forests in Alabama. Report No. 2002-02-02. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Hess, N.J., Otrrosina, W.J., Carter, E.A., Steinman, J., Jones, J.P., Eckhardt, L.G., Weber, A., and Walkinshaw, C. **2001**. Assessment of loblolly pine decline in central Alabama. Gen. Tech. Rep. SRS-48. Ashville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 558-564 pp.

Bauman, T.A., Eckhardt, L.G., Goyer, R.A., and Klepzig, K.D. **2001**. Interactions of fire, insects and root pathogens in longleaf pine. P. 95-96 *in* Proceedings of the third longleaf alliance regional conference, Alexandria, Louisiana, October 16-18, on Restoration and management of longleaf pine ecosystems: silviculture, ecological, social, political and economic challenges, Kush, J.S. (ed), Longleaf Alliance Report No. 5.

Goyer, R.A., Bauman, T.A., Lenhard, G.J. and Eckhardt, L.G. **2001**. Effects of fire regimes in longleaf pine restoration efforts in the southeastern US. P. 52 *in* Boreal Odyssey: Proceedings of the North American Forest Work Conference. May 14-18, 2001. Edmonton, Alberta, Canada. W.J.A. Volney, J.R. Spence, and E.M. Lefebure (eds)

## PAPERS OR LECTURES:

### *Invited International Presentations / Lectures / Seminars (\*\*Undergraduate or \*Graduate Student)*

\*Acquah G. E., Via B.K., Eckhardt L.G., Fasina O. O. and Billor N. **2015**. Application of near infrared spectroscopy in the screening of disease tolerant *Pinus taeda* (Loblolly Pine) families for chemistry, strength and bioenergy. 19th International Nondestructive Testing and Evaluation of Wood Symposium, Rio de Janeiro, Brazil.

Via, B.K. and Eckhardt, L.G. **2014**. A new modelling strategy for *Pinus taeda* genetic families: connection of chemistry to products and disease. The Institute for Commercial Forestry Research & The Department of Agriculture, Forestry & Fisheries 6<sup>th</sup> Forest Science Symposium, Pietermaritzburg, South Africa.

\*Piculell, B.J., Hoeksema, J.D., and Eckhardt, L.G. **2013**. The good and the bad: trade-offs between disease resistance and symbionts in loblolly pine. 32<sup>nd</sup> New Phytologist Symposium on Plant interactions with other organisms: molecules, ecology and evolution. Buenos Aires, Argentina.

Chappelka, A.H., Eckhardt, L.G., and Chieppa, J. **2013**. Interaction of future climate change scenarios of elevated tropospheric ozone and decreasing rainfall amounts with loblolly pine decline. Western Insect Forest Disease Work Conference, Alberta Canada.

Eckhardt, L.G. **2013**. Latest developments in pine decline research, disease development and management. International Congress of Plant Pathology. Beijing, China.

Eckhardt, L.G., Bauman, T.A., Menard, R.D., de Beer, Z.W., Wingfield, M.J., and Sediles, A. **2013**. Evaluation of mortality in natural stands of *Pinus oocarpa* and *P. caribae* in Nicaragua. The Third IUFRO Latin American Congress (IUFROLAT) jointly by The International Union of Forest Research Organizations

(IUFRO) and the Tropical Agricultural Research and Higher Education Center (CATIE) and partnered by the Ibero American Model Forest Network (RIABM). San Jose, Costa Rica.

Eckhardt, L.G. **2012**. Pine root disease, root-feeding bark beetles and ophiostomatoid fungi in the United States and their impact on forest health. Institute for Commercial Forestry Research. Pietermaritzburg, South Africa.

Eckhardt, L.G. and Matusick, G. **2011**. Variation in pathogenicity and virulence of four ophiostomatoid fungi and *Heterobasidion irregulare* in healthy loblolly and slash pine roots. XIII Conference on Root and Butt Rot of Forest Trees, Firenze, Italy.

Menard, R.D, Ward, J.D., Sediles, A., and Eckhardt, L.G. **2011**. Evaluation of mortality in natural stands of *Pinus oocarpa* in Nicaragua. Annual Meeting of the Tree Protection Co-Operative Programme (TPCP) and the DST/NRF Centre of Excellence in Tree Health Biotechnology. Pretoria, South Africa.

Eckhardt, L.G., Menard, R.D., Ward, J.D., and Sediles, A. **2010**. Evaluation of mortality in natural stands of *Pinus oocarpa* and *Pinus caribaea* in Nicaragua. Annual Meeting of the UNA Department of Protection of Agriculture and Forests, Instituto Nacional Forestal (INAFOR), and Ministry of Natural Resources (MARENA), Universidad Nacional Agraria (UNA), Managua, Nicaragua.

\*Matusick, G. and Eckhardt, L.G. **2010**. Pine decline and forest management on federal lands in the southeastern United States. School of Biological Sciences and Biotechnology, CPSM Seminar Series, Murdoch University, Western Australia.

Eckhardt, L.G., Menard, R.D., Zanzot, J., and Matusick, G. **2009**. Pathogenic fungi and associated vectors in southern pine root decline. Forest and Agricultural Biotechnology Institute. University of Pretoria, Pretoria, South Africa.

Eckhardt, L.G. **2008**. Forest Biosecurity. Annual Meeting of the UNA Department of Protection of Agriculture and Forests, Instituto Nacional Forestal (INAFOR), and Ministry of Natural Resources (MARENA), Universidad Nacional Agraria (UNA), Managua, Nicaragua.

Eckhardt, L.G. and Menard, R.D. **2008**. Pine decline and the involvement of bark beetles and ophiostomatoid fungi. Universidad Nacional Agraria (UNA), Managua, Nicaragua.

Eckhardt, L.G. **2008**. *Pinus* species diseases and insect pests and their possible economic impacts. Forest Health Initiative Meeting. Universidad Nacional Agraria (UNA), Managua, Nicaragua.

Eckhardt, L.G. **2008**. Forest pathology and its future implications. Department of Plant Protection and Entomology, Universidad Nacional Agraria (UNA), Managua, Nicaragua.

Eckhardt, L.G., Menard, R.D., Zanzot, J., and Matusick, G. **2007**. Southern pine root decline. Annual Meeting of the Tree Protection Co-Operative Programme (TPCP) and the DST/NRF Centre of Excellence in Tree Health Biotechnology. Pretoria, South Africa.

Eckhardt, L.G. and Menard, R.D. **2006**. Pine decline in the southeastern United States and the involvement of bark beetles and Ophiostomatoid fungi. The Ophiostomatoid Fungi: Expanding Frontiers Conference, Brisbane, Australia.

*Invited Presentations / Lectures / Seminars / Workshops*

Eckhardt, L.G. **2016**. Forest health of southern pines. Pine Mountain and War Eagle Chapters of the Society of American Foresters, Oxbow Meadows, Columbus, GA

\*Devkota, P., and Eckhardt, L.G. 2016. Variation in Tolerance of Mature *Pinus taeda* Families to Root Infesting Fungi *Grossmannia huntii* And *Leptographium terebrantis*. This is Research: Student Symposium 2016, Auburn University, Auburn, AL

Eckhardt, L.G. **2016**. Forest health of southern pines. Southeastern Society of American Foresters Annual Meeting, Auburn, AL

Eckhardt, L.G. **2015**. *Leptographium* species: Tree pathogens and agents of blue stain, and their bark beetle associates [Pine Decline: Is it real? If so, what are its effects?] Clemson Cooperative Extension Landowners Workshop and Field Trip, T & S Farms, Leesville, SC

Eckhardt, L.G. **2015**. An overview of forest health research at the forest health cooperative Auburn University. Entomology and Plant Pathology Departmental Seminar, Auburn University, Auburn, AL

Eckhardt, L.G. , Ditchkoff, S.S. , Duong, T.A. , De Beer, Z.W. , and Wingfield, M.J. **2014**. Two new ophiostomatoid species isolated from soil on snouts of feral hogs damaging pine roots in Georgia, USA. International Wild Pig Conference Science & Management, Montgomery, AL

Eckhardt, L.G. **2014**. The biology of pine decline in the southeastern US. Rayonier Yearly Forest Health Meeting, Eufaula, AL

Eckhardt, L.G. **2013**. The biology of pine decline in the southeastern US. Farm City and Russell County Natural Resources Council Landowners Meeting. Seale, AL

Eckhardt, L.G. **2013**. The biology of pine decline in the southeastern US. Rayonier Yearly Forest Health Meeting, Eufaula, AL

Eckhardt, L.G. **2013**. An overview of forest health research at the forest health cooperative Auburn University. Brasseltown, GA

Eckhardt, L.G. **2013**. Pine root disease, root-feeding bark beetles and ophiostomatoid fungi in the United States and their impact on forest health. SAF, Pine Mountain Chapter, Harris County, GA

Eckhardt, L.G. **2013**. Loblolly family screening for resistance to fungi associated with loblolly pine decline. GA SAF Annual Meeting. Valdosta, GA

Eckhardt, L.G. **2012**. Extent and nature of ophiostomatoid associated declines in the South. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA.

Eckhardt, L.G. **2012**. Pine decline. Emerging Issues Panel, Georgia Forestry Association Annual Conference and Forestry Expo. Savannah, GA

Eckhardt, L.G. **2012**. Pine root disease, root-feeding bark beetles and ophiostomatoid fungi in the United States and their impact on forest health. School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL

Eckhardt, L.G. **2012**. The biology of pine decline in the southeastern US. Alabama Natural Resource Council Outreach Symposium. Auburn University, Auburn, AL

Eckhardt, L.G. **2011**. Pine decline: new developments and management. Tree Improvement Cooperative Annual Contact Meeting, Macon, GA

Eckhardt, L.G., Matusick, G., and Zeng, Y. **2011**. Pine decline: the involvement of bark beetles and ophiostomatoid fungi. Department of Biology, The University of Mississippi, Oxford, MS

Meyerpeter, M.B., and Eckhardt, L.G. **2011**. Pine fungal disease and insect associates in Central America. 2011 York Endowment International Scholars Seminar, Auburn, AL.

Eckhardt, L.G. **2011**. Pine decline in the southeast. Georgia Forestry Association Regional Forestry Meeting, Albany, GA

Eckhardt, L.G. **2011**. Pine decline – is it a nursery issue? Southern Forest Nursery Management Cooperative Contact Meeting. Augusta GA

Eckhardt, L.G. **2011**. Pine decline: new developments and management. Tree Productivity Cooperative Annual Contact Meeting, Waycross, GA

Eckhardt, L.G. **2011**. Insect and disease: issues in the southeastern United States. Brazilian Foresters Conference, Auburn University, Auburn, AL

Eckhardt, L.G. **2010**. Pine decline: new developments and management. Department of Plant Pathology and Physiology, Louisiana State University, Baton Rouge, LA

Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2009**. Pine decline: the involvement of bark beetles and ophiostomatoid fungi. Entomology Club, Entomology and Plant Pathology Department, Auburn University, Auburn, AL.

Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2009**. Pine decline: the involvement of bark beetles and ophiostomatoid fungi. Society of American Foresters National Convention *in* New Trends in Management of Forest Insect and Diseases in the Southeast, Orlando, FL

Menard, R.D., Ward, J.D., Eckhardt, L.G., and Sediles, A. **2009**. Evaluation of mortality in natural stands of *Pinus oocarpa* and *Pinus caribaea* in Nicaragua. Southeastern Forest Insect Work Conference, Gulfport, MS

Eckhardt, L.G. **2009**. Pine forest decline in pine plantations. Alabama Treasure Forest Association, Tallapoosa County Landowners Meeting, Camp Hill, AL

Eckhardt, L.G. **2009**. Latest developments in pine decline disease development and management. South-wide Forest Disease Workshop, Greenville, SC

Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2009**. Pine decline: what is it and what can you do about it? Annual Meeting of the Mississippi Society of American Foresters, Bay St. Louis, MS

Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2009**. Pine decline: what is it and what can you do about it? Alabama Forestry Producers, Alabama Farmers Federation, 2009 Commodity Organizational Meeting. Birmingham, AL

Eckhardt, L.G. **2008**. *Leptographium* update in the southeast. Russell County Forest Landowners Forestry Banquet-Update of Current Forestry Practices, Phenix City, GA.

Eckhardt, L.G. **2008**. *Leptographium* update in the southeast. Pine Straw Production, Stand Management, and Economics. Sandhill Research and Educational Center, North Crossing, SC.



Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2008.** Pine decline in the southeastern United States and the involvement of bark beetles and ophiostomatoid fungi. Russell County Forest Landowners Forest Health Field Trip, Russell County, AL.

Eckhardt, L.G., Zanzot, J.W., and Pope, C.R. **2008.** Hylastes population dynamics and forest health evaluation in association with thinning and fertilization. Annual Advisory Committee Meeting of the Forest Nutrition Cooperative, Roanoke, VA.

Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2008.** Pine decline in the southeastern United States and the involvement of bark beetles and ophiostomatoid fungi. Weyerhaeuser Forest Health Field Trip, Camden, AL.

Eckhardt, L.G., Menard, R.D., Matusick, G., and Zanzot, J.W. **2008.** The biology of pine decline in Alabama. Southeastern Society of American Foresters Meeting, Wood Basket Chapter, Selma, AL

Eckhardt, L.G., Menard, R.D., and Matusick, G. **2008.** The biology and ecology of loblolly pine decline in Alabama. Alabama Southeastern Society of American Foresters Division Annual Meeting, Birmingham Botanical Gardens, AL.

Menard, R.D., Eckhardt, L.G., and Matusick, G. **2008.** The biology of loblolly pine decline in Alabama. Alabama Forestry Association Mid-Winter Meeting, Sandestin Beach, FL.

Eckhardt, L.G. **2007.** Complex insect-pathogen interactions associated with static and dynamic stressors involved in forest management. Department of Plant Pathology and Entomology, Mississippi State University, Starkville, MS

Eckhardt, L.G. **2007.** Identification and characterization of root infecting fungi and their vectors involved in root disease and decline of *Pinus* spp. in the southern United States. Auburn University, Auburn, AL

Eckhardt, L.G., Zanzot, J., and Matusick, G. **2007.** Longleaf management, prescribed fire, and RCW habitat at Fort Benning GA. First Annual Site Management for RCW and Forest Health Impacts Conference, Pineville, LA.

Eckhardt, L.G. **2006.** How to work with the US Forest Service and National Forest System: A collaborators point of view. Forest field tour for scientist and potential collaborators at the Oakmulgee Ranger District, Talladega National Forest, Tuscaloosa, AL at the request of the District Ranger.

Eckhardt, L.G. **2006.** *Leptographium* and pine decline: what to look for. Forestry Workshop, Bender Demonstration Forest, Juliette, GA.

Eckhardt, L.G. and Menard, R.D. **2006.** Loblolly pine decline, root feeding bark beetle vectors and disturbances in loblolly and longleaf pine. Public meeting presentation at the Oakmulgee Ranger District, Talladega National Forest, Tuscaloosa, AL at the request of the District Ranger.

Eckhardt, L.G. **2006.** Pine decline, management, and military training. SERO Forestry Workshop, Fort Bragg Army Base, Fayetteville, NC.

Eckhardt, L.G. **2005.** *Leptographium* species: Tree pathogens and agents of blue stain and their bark beetle associates. Special 8 hour symposium given for the Clemson Extension Service, Orangeburg, SC.

Eckhardt, L.G., Menard, R.D., Hess, N.J. and Carter, E.A. **2005.** Loblolly pine decline on longleaf sites caused by root pathogens. 2<sup>nd</sup> Mountain Longleaf Pine Workshop, Mount Berry, GA.

Eckhardt, L.G. **2005**. *Leptographium* species: tree pathogens and agents of blue-stain and their bark beetle associates. Alien Invaders in our Forests and Watersheds Symposium. Columbus State University, Columbus, GA.

Eckhardt, L.G. **2005**. Complex pathogen-insect interactions associated with static and dynamic stressors involved in forest management. Department of Environmental Sciences and Forest Biology, State University of New York, Syracuse, NY

Eckhardt, L.G. **2005**. Complex insect-pathogen interactions associated with static and dynamic stressors involved in forest management. Yale School of Forestry, Yale University, New Haven, CT

Eckhardt, L.G. **2005**. Complex pathogen-insect interactions associated with static and dynamic stressors involved in forest management. Auburn School of Forestry, Auburn University, Auburn, AL

Eckhardt, L.G. and Menard, R.D. **2004**. Loblolly pine decline, its risk map, and how to apply it in forest management. Presentation given to the U.S. Fish & Wildlife Service, Carolina Sandhills National Wildlife Refuge, McBee, SC.

Eckhardt, L.G. and Menard, R.D. **2004**. Loblolly pine decline, its risk map, and how to apply it in forest management. Presentation given to the Forestry and Wildlife Management Branches, Fort Jackson Military Reservation, Fort Jackson, SC.

Eckhardt, L.G. and Menard, R.D. **2004**. Loblolly pine decline, its risk map, and how to apply it in forest and endangered species management. Presentation given to the Talladega Ranger District, Talladega National Forest, Talladega, AL at the request of the District Ranger.

Eckhardt, L.G. and Menard, R.D. **2004**. Loblolly pine decline, its risk map, and how to apply it in forest and endangered species management. Presentation given to the Fish and Wildlife Service, Daphne, AL at the request of the Oakmulgee District Ranger.

Eckhardt, L.G. and Menard, R.D. **2004**. Loblolly pine decline, its risk map, and how to apply it in forest management. Presentation given to the Forestry and Wildlife Management Branches, Fort Benning Military Reservation, Columbus, GA.

Eckhardt, L.G. and Menard, R.D. **2003**. Loblolly pine decline, its risk map, and how to apply it in forest management. Presentation given to the Oakmulgee Ranger District, Talladega National Forest, Tuscaloosa, AL at the request of the District Ranger.

Eckhardt, L.G., Menard, R.D., Jones, J.P., and Klepzig, K.D. **2003**. Insect vectors of *Leptographium* species associated with loblolly pine decline. Thirtieth Anniversary East Texas Forest Entomology Seminar. Nacogdoches, TX

Eckhardt, L.G. **2003**. *Leptographium* species and their vectors as components of loblolly pine decline. Department of Plant Pathology and Crop Physiology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge, LA

Eckhardt, L.G. **2002**. Loblolly Pine Decline, *Leptographium* spp. and Root -Feeding Insects. Department of Entomology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge, LA

Eckhardt, L.G. and Hess, N.J. **2002**. Loblolly pine decline and the advantages of risk mapping in Central Alabama. Public meeting presentation at the Oakmulgee Ranger District, Talladega National Forest, Tuscaloosa, AL at the request of the District Ranger.

Eckhardt, L.G., Jones, J.P., and Hess, N.J. **2001**. Ecological implications of insects, fungi and vegetation density in loblolly stands. Southern Forest Insect Work Conference, Jekyll Island, GA

Eckhardt, L.G. and Culver, J.N. **1999**. Regions of the tobacco mosaic tobamovirus replicase gene that mediate resistance. Department of Plant Pathology and Crop Physiology, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge, LA

Eckhardt, L.G. and Culver, J.N. **1998**. Regions of the tobacco mosaic tobamovirus replicase gene that mediate resistance. Center for Agricultural Biotechnology, College Park, MD

*Presentations at Professional Meetings (\*\*Undergraduate or \*Graduate Student)*

\*Devkota, P., and Eckhardt, L.G. **2016**. Variation in Tolerance of Several Loblolly Pine (*Pinus taeda*) Families to *Grosmannia huntii* and *Leptographium terebrantis*. Forest Health Cooperative Advisory Meeting, Auburn, AL

\* Devkota, P., Mensah, J., Nadel, R. and Eckhardt, L.G., **2016**. Impact of *Leptographium terebrantis* Inoculum Density on Loblolly Pine Physiology. Forest Health Cooperative Advisory Meeting, Auburn, AL

\*Devkota, P., and Eckhardt, L.G. **2016**. Virulence of *Leptographium terebrantis* and *Grosmannia huntii* on Loblolly Pine Families under Drought Stress. Forest Health Cooperative Advisory Meeting, Auburn, AL

\*Devkota, P., and Eckhardt, L.G. **2016**. Response of Different Mature Loblolly Pine (*Pinus taeda* L.) Families to *Leptographium terebrantis* and *Grosmannia huntii*. Forest Health Cooperative Advisory Meeting, Auburn, AL

\* Devkota, P., and Eckhardt, L.G., and Kloepper, J.W. **2016**. Antibiosis of Blue-Stain Fungi by Plant Growth-Promoting Rhizobacteria. Forest Health Cooperative Advisory Meeting, Auburn, AL

\*Cole A.B., Eckhardt, L.G., Liebold, A., and Slippers, B. **2016**. Effect of growth rate on *Amylostereum* spp. fungus by terpenes. This Is Research: Student Symposium, Auburn, AL

\*Devkota, P., and Eckhardt, L.G. **2016**. Variation in tolerance of mature *Pinus taeda* families to root infesting fungi *Grosmannia huntii* and *Leptographium terebrantis*. This is Research: Student Symposium 2016, Auburn University, Auburn, AL

Clay, N.A., Little, N., Eckhardt, L.G. and Riggins, J.J. **2015**. Widespread and complex interactions among bark beetle vectored blue stain (ophiostomatoid) fungi and subterranean termites. Ecological Society of America Annual Meeting, Baltimore, MD

\*Piculell, B.J. Nelson, C.D., Roberds, J., Eckhardt, L.G., and Hoeksema, J.D. **2015**. Examining the evolutionary interactions of loblolly pine with both beneficial and pathogenic fungi. Ecological Society of America Annual Meeting, Baltimore, MD

\*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Cogongrass (*Imperata cylindrica*) reduces colonization of mycorrhizal fungi on loblolly pine (*Pinus taeda*) in commercial stands. Ecological Society of America Annual Meeting, Baltimore, MD

Via, B.K. and Eckhardt, L.G. **2015**. Near infrared reflectance (NIR) spectroscopy: dialing stem chemistry for optimal root disease resistance and forest products. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, GA

Nadel, R.L., Matusick, G., and Eckhardt, L.G. **2015**. Quantifying the impact of pine decline in the southeastern United States. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, GA

\*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, GA

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of elevated tropospheric ozone and altered irrigation regimes on loblolly pine seedlings inoculated with ophiostomatoid fungi. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, GA

\*Devkota, P. and Eckhardt, L.G. **2015**. Variation In Tolerance of *Pinus taeda* Families to Root Infesting Fungi *Grosmannia huntii* and *Leptographium terebrantis*. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, GA

\*Cole, A., Eckhardt, L., Liebold, A., and Slippers, B. **2015**. A survey for *Sirex noctilio* and native woodwasps in Alabama. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, GA

Via, B.K. and Eckhardt, L.G. **2015**. Near infrared reflectance (NIR) spectroscopy: dialing stem chemistry for optimal root disease resistance and forest products. Center for Advanced Forestry Systems 2015 Industrial Advisory Board Meeting, Asheville, NC

Nadel, R.L., Matusick, G., and Eckhardt, L.G. **2015**. Quantifying the impact of pine decline in the southeastern United States. Center for Advanced Forestry Systems 2015 Industrial Advisory Board Meeting, Asheville, NC

\*Acquah, G., Via, B.K., and Eckhardt, L.G. **2015**. Nondestructive estimation of the chemical and thermal properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. This is Research: Student Symposium 2015. Auburn University, Auburn, AL

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of elevated tropospheric ozone and altered irrigation regimes on loblolly pine seedlings inoculated with ophiostomatoid fungi. This is Research: Student Symposium 2015. Auburn University, Auburn, AL

\*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. This is Research: Student Symposium 2015. Auburn University, Auburn, AL

\*Devkota, P. and Eckhardt, L.G. **2015**. Variation In Tolerance of *Pinus taeda* Families to Root Infesting Fungi *Grosmannia huntii* and *Leptographium terebrantis*. This is Research: Student Symposium 2015. Auburn University, Auburn, AL

\*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. Southeastern Ecology and Evolution Conference, Athens, GA

\*Acquah, G., Via, B.K., and Eckhardt, L.G. **2015.** Nondestructive estimation of the chemical and thermal properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN

Eckhardt, L.G., Ditchkoff, S.S., Duong, T.A., DeBeer, Z.W, and Wingfield, M.J. **2015.** Two new ophiostomatoid species isolated from soil on snouts of wild pigs damaging pine roots in Georgia. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015.** Effects of elevated tropospheric ozone and altered irrigation regimes on loblolly pine seedlings inoculated with ophiostomatoid fungi. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN

\*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015.** Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN

Carter, E.A., Brunson, B.A., and Eckhardt, L.G. **2015.** Soil properties associated with cogongrass infested and non-infested loblolly pine stands in Mississippi. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN

Via, B.K. and Eckhardt, L.G. **2014.** Near infrared reflectance (NIR) spectroscopy: dialing stem chemistry for optimal root disease resistance and forest products. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Acquah, G., Via, B.K., and Eckhardt, L.G. **2014.** Nondestructive estimation of the chemical and thermal properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014.** Interaction of altered tropospheric ozone concentrations with loblolly pine decline. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Bauman, T.A., Eckhardt, L.G., Menard, R.D., de Beer, Z.W., Sediles, A., and Wingfield, M.J. **2014.** Determining fungal communities associated with the bark beetle *Dendroctonus approximatus* in Mexico and Central America. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

Eckhardt, L.G. and Neuman, R. **2014.** Field trial of a controlled vapor delivery method in an IPM system. Forest Health Cooperative Annual Meeting, Americus, GA

Sword-Sayer, M.A., Singh, A., Eckhardt, L.G., and Sung, S.J. **2014.** Assessment of defense capacity among 15 loblolly pine families. Forest Health Cooperative Annual Meeting, Americus, GA

Eckhardt, L.G. and Nadel, R.L. **2014.** Variation in resistance of *Pinus taeda* families against *Leptographium* root infecting fungi – year three update. Forest Health Cooperative Annual Meeting, Americus, GA

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014.** Interactions of future climate change scenarios of elevated tropospheric ozone and decreasing rainfall amounts with loblolly pine decline. Forest Health Cooperative Annual Meeting, Americus, GA

\*Trautwig, A.N., Eckhardt, L.G., and Hoeksema, J.D. **2014.** Mycorrhizal Communities in *Imperata cylindrical* Invaded and Non-Invaded Commercial *Pinus taeda* Stands. Forest Health Cooperative Annual Meeting, Americus, GA

Nadel, R.L., Enebak, S.A., and Eckhardt, L.G. **2014.** Seed certification and pitch canker. Forest Health Cooperative Annual Meeting, Americus, GA

\*Bauman, T.A., Eckhardt, L.G., Menard, R.D., de Beer, Z.W., Sediles, A., and Wingfield, M.J. **2014.** Determining fungal communities associated with the bark beetle *Dendroctonus approximatus* in Mexico and Central America. Forest Health Cooperative Annual Meeting, Americus, GA

Eckhardt, L.G., Via, B.K., and Enebak, S.A. **2014.** Selection of genetically superior trees for disease resistance as a function of wood chemistry. CAFS IAB Meeting, The Coeur d'Alene Resort, Idaho

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014.** Interaction of altered tropospheric ozone concentrations with loblolly pine decline. CAFS IAB Meeting, The Coeur d'Alene Resort, Idaho

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014.** Interaction of altered tropospheric ozone concentrations with loblolly pine decline. Research Week 2014, Auburn University, AL.

\*Trautwig, A.N., Eckhardt, L.G., and Hoeksema, J.D. **2014.** Mycorrhizal Communities in *Imperata cylindrical* Invaded and Non-Invaded Commercial *Pinus taeda* Stands. Research Week 2014, Auburn University, AL.

\*Acquah, G., Via, B.K., Fasina, O. and Eckhardt, L.G. **2014.** Nondestructive prediction of the chemical and thermal properties of forest biomass using near infrared spectroscopy. Research Week 2014, Auburn University, AL.

Eckhardt, L.G. and Neuman, R. **2014.** Field trial of a controlled vapor delivery method in an IPM system. Research Week 2014, Auburn University, AL

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014.** Interaction of altered tropospheric ozone concentrations with loblolly pine decline. Graduate Student Forum, Auburn University, AL.

\*Trautwig, A.N., Eckhardt, L.G., and Hoeksema, J.D. **2014.** Mycorrhizal Communities in *Imperata cylindrical* Invaded and Non-Invaded Commercial *Pinus taeda* Stands. Graduate Student Forum, Auburn University, AL.

\*Acquah, G., Via, B.K., Fasina, O. and Eckhardt, L.G. **2014.** Nondestructive prediction of the chemical and thermal properties of forest biomass using near infrared spectroscopy. Graduate Student Forum, Auburn University, AL.

\*Piculell, B.J., Hoeksema, J.D., and Eckhardt, L.G. **2014.** The good and the bad: trade-offs between disease resistance and symbionts in loblolly pine. South-wide Forest Disease Workshop, Andalusia, AL.

Riggins, J., Little, N., and Eckhardt, L. **2014.** Subterranean termites and ophiostomatoid fungi: a secret symbiosis? South-wide Forest Disease Workshop, Andalusia, AL.

Sword-Sayer, M.A., Singh, A., Eckhardt, L.G., and Sung, S.J. **2014.** Assessment of defense capacity among 15 loblolly pine families. South-wide Forest Disease Workshop, Andalusia, AL.

Carter, E.A., Hess, N., Goddard, A., and Eckhardt, L.G. **2014.** Soil characteristics of loblolly decline sites in Alabama. South-wide Forest Disease Workshop, Andalusia, AL.

Via, B.K., Eckhardt, L.G., and Acquah, G. **2014**. Genetic selection of loblolly pine (*Pinus taeda* L.) with near infrared spectroscopy combined root disease resistance and forest products. South-wide Forest Disease Workshop, Andalusia, AL.

\*Trautwig, A.N., Eckhardt, L.G., and Hoeksema, J.D. **2014**. Mycorrhizal Communities in *Imperata cylindrical* Invaded and Non-Invaded Commercial *Pinus taeda* Stands. South-wide Forest Disease Workshop, Andalusia, AL.

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014**. Interaction of altered tropospheric ozone concentrations with loblolly pine decline. South-wide Forest Disease Workshop, Andalusia, AL.

\*Bauman, T.A., Eckhardt, L.G., Menard, R.D., de Beer, Z.W., Sediles, A., and Wingfield, M.J. **2014**. Determining fungal communities associated with the bark beetle *Dendroctonus approximatus* in Mexico and Central America. South-wide Forest Disease Workshop, Andalusia, AL.

\*Piculell, B.J., Hoeksema, J.D., and Eckhardt, L.G. **2013**. The good and the bad: trade-offs between disease resistance and symbionts in loblolly pine. 32<sup>nd</sup> New Phytologist Symposium on Plant interactions with other organisms: molecules, ecology and evolution. Buenos Aires, Argentina.

Chappelka, A.H., Eckhardt, L.G., and Chieppa, J. **2013**. Interactions of future climate change scenarios of elevated tropospheric ozone and decreasing rainfall amounts with loblolly pine decline. AHC-NECC Annual Working Group Meeting, Durham, NH.

Loewenstein, N.J., Enloe, S.F., Eckhardt, L.G., Held, D., and Lauer, D. **2013**. Use of prescribed fire, glyphosate and seedling in cogongrass infested longleaf pine stands: impacts on species relative dominance. FLEPPC/SE-EPPC Joint Annual Symposium, Panama City Beach, FL.

Enloe, S.F., Loewenstein, N.J., Held, D., Eckhardt, L.G., and Lauer, D. **2013**. Use of prescribed fire, glyphosate and seedling in cogongrass infested longleaf pine stands: impacts on cogongrass, species richness and species diversity. FLEPPC/SE-EPPC Joint Annual Symposium, Panama City Beach, FL.

Enebak, S.A. and Eckhardt, L.G. **2013**. An overview of forest health research at the forest health dynamics laboratory at Auburn University. Annual Center for Advanced Forest Systems (CAFS) Meeting, St. Simons Island, GA.

Anderson, D., Oak, S., Enebak, S.A., and Eckhardt, L. **2012**. Comparison of stream baiting protocols for recovering *Phytophthora ramorum* from streams and nursery discharge. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA.

\*Singh, A. and Eckhardt, L.G. **2012**. Variation in resistance of *Pinus taeda* families against *Leptographium* root infecting fungi. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA.

\*Brunson, B.A., Carter, E.A., and Eckhardt, L.G. **2012**. Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA.

\*Meyerpeter, M.B. and Eckhardt, L.G. **2012**. Mapping loblolly pine decline hazard and risk across the southeastern United States. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA.

\*Meyerpeter, M.B. and Eckhardt, L.G. **2012**. Mapping loblolly pine decline hazard and risk across the southeastern United States. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.

\*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2012**. Cogongrass: Does it affect root-feeding beetle populations and pine decline susceptibility. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.

\*Singh, A., Anderson, D.D., and Eckhardt, L.G. **2012**. Resistance of *Pinus taeda* families against *Leptographium* root fungi and assessment of family morphological traits linked to *Leptographium* infections. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.

\*Zeng, Y., Kidd, K.R., and Eckhardt, L.G. **2012**. Bark beetle populations related to Silviculture disturbances. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.

\*Zeng, Y. and Eckhardt, L.G. **2012**. Thinning effects on incidence of ophiostomatoid fungal species in decline impacted *Pinus taeda* stands. Research and Creative Scholarship, Research Week, Graduate Student Forum, Auburn University, Auburn, AL.

\*Singh, A., Anderson, D.D., and Eckhardt, L.G. **2012**. Variation in resistance of *Pinus taeda* and *P. elliotii* families against *Leptographium* root infecting fungi. Graduate Research Forum, Auburn University, Auburn, AL.

\*Zeng, Y. and Eckhardt, L.G. **2012**. Thinning effects on incidence of ophiostomatoid fungal species in decline impacted *Pinus taeda* stands. Graduate Research Forum, Auburn University, Auburn, AL.

Steury, T.D., Eckhardt, L.G., Lowery, D., Hunter, S.A., Romagosa, C.M., Ditchkoff, S.s., Angle, C.T., and Tom, B.M. **2012**. Success and failures of an ecological detection dog service. Alabama Chapter of the Wildlife Society meeting, Decatur, AL

\*Brunson, B.A., Carter, E.A., and Eckhardt, L.G. **2012**. Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. American Phytopathology Society Southern Division 2012 Meeting, Birmingham, AL.

Anderson, D.D., Oak, S.A., Enebak, S.A., and Eckhardt, L.G. **2012**. Comparison of stream baiting protocols for recovering *Phytophthora ramorum* from streams and nursery discharge. American Phytopathology Society Southern Division 2012 Meeting, Birmingham, AL.

\*Singh, A., Anderson, D.D., and Eckhardt, L.G. **2012**. Variation in resistance of *Pinus taeda* and *P. elliotii* families against *Leptographium* root infecting fungi. American Phytopathology Society Southern Division 2012 Meeting, Birmingham, AL.

\*Meyerpeter, M.B. and Eckhardt, L.G. **2012**. Mapping the extent of loblolly pine decline in Alabama and Georgia. American Phytopathology Society Southern Division 2012 Meeting, Birmingham, AL.

\*Zeng, Y. and Eckhardt, L.G. **2012**. Thinning effects on incidence of ophiostomatoid fungal species in decline impacted *Pinus taeda* stands. American Phytopathology Society Southern Division 2012 Meeting, Birmingham, AL.

Steury, T.D., Eckhardt, L.G., Lowery, D., Hunter, S.A., Romagosa, C.M., Ditchkoff, S.s., Angle, C.T., and Tom, B.M. **2011**. Success and failures of an ecological detection dog service. 65th Annual Conference of the Southeastern Association of Fish and Wildlife Agencies, Nashville, TN



- \*Singh, A., Anderson, D.D., and Eckhardt, L.G. **2011**. Resistance of *Pinus taeda* families against *Leptographium* root fungi and assessment of family morphological traits linked to *Leptographium* infections. Tree Improvement Cooperative Contact Meeting. Macon, GA.
- \*Brunson, B.A. and Eckhardt, L.G. **2011**. Cogongrass: Does it affect root-feeding beetle populations and pine decline susceptibility. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- \*Singh, A., Anderson, D.D., and Eckhardt, L.G. **2011**. Resistance of *Pinus taeda* families against *Leptographium* root fungi and assessment of family morphological traits linked to *Leptographium* infections. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- Carter, E.A. and Eckhardt, L.G. **2011**. Select soil properties associated with loblolly pine decline in the southeastern United States. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- \*Zeng, Y., Kidd, K.R., and Eckhardt, L.G. **2011**. Bark beetle populations related to Silviculture disturbances. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- \*Walls, J.G., Hepp, G.R. and Eckhardt, L.G. **2011**. Effects of incubation delay on hatchability and microbial growth of wood duck eggs. American Ornithologists' Union (AOU) meeting, Jacksonville, FL.
- \*Zeng, Y., Kidd, K.R., and Eckhardt, L.G. **2011**. Association between bark beetle population dynamics and silviculture disturbances in decline-impacted loblolly pine stands. Graduate Scholars Forum, Auburn University, Auburn, AL.
- \*Zelko, J., Menard, R.D., Matusick, G., and Eckhardt, L.G. **2011**. Monoterpene and oleoresin effect on ophiostomatoid fungi isolated from Nicaragua. Graduate Scholars Forum, Auburn University, Auburn, AL.
- \*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. **2011**. Population patterns of bark and ambrosia beetles over a two-year period. Graduate Scholars Forum, Auburn University, Auburn, AL.
- Menard, R.D., Ward, J.D., Eckhardt, L.G., and Sediles, A. **2011**. Evaluation of mortality in natural stands of *Pinus oocarpa* in Nicaragua. South-wide Forest Disease Workshop, Quincy, FL.
- \*Duong, T.A., de Beer, Z.W., Eckhardt, L.G., Wingfield, B.D., and Wingfield, M.J. **2011**. Population diversity of the pine-infecting fungus *Grosmannia alacris*. South African Society of Plant Pathology 47<sup>th</sup> Congress, Kruger National Park, South Africa.
- Eckhardt, L.G. **2010**. Thinning and fertilization: effects on bark beetle abundance in a loblolly pine plantation. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- \*Zeng, Y., Booker, K.R., and Eckhardt, L.G. **2010**. Bark beetle populations related to silviculture disturbances. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- \*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. **2010**. Population patterns of bark and ambrosia beetles over a two year period. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- \*Brunson, B.A. and Eckhardt, L.G. **2010**. Cogongrass: does it affect root-feeding beetle populations and pine decline susceptibility? Forest Health Cooperative Annual Advisory Meeting. Auburn, AL.
- Menard, R.D., Meyerpeter, M.B., and Eckhardt, L.G. **2010**. Possible invasive ophiostomatoid fungi from Nicaragua. Forest Health Cooperative Annual Advisory Meeting, Auburn, AL.

\*Zelko, J.C., Menard, R.D., and Eckhardt, L.G. **2010**. Virulence of three ophiostomatoid fungi isolated from Nicaragua on slash, loblolly and longleaf pine seedlings. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*Martin, S., Held, D., Enloe, S., Loewenstein, N., and Eckhardt, L. **2010**. Impact of cogongrass management strategies on arthropod fauna in longleaf pine. ESA 58<sup>th</sup> Annual Meeting, San Diego, CA

\*Thompson, J.A., and Eckhardt, L.G. **2010**. Bark beetle diversity. Annual Graduate Student Research Forum, Auburn University, Auburn, AL.

\*Zanzot, J.W. and Eckhardt, L.G. **2009**. Thinning and fertilization: effects on bark beetle abundance in a loblolly pine plantation. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*Zeng, Y., Booker, K.R., and Eckhardt, L.G. **2009**. Bark beetle populations related to silviculture disturbances. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*Zelko, J.C., Menard, R.D., and Eckhardt, L.G. **2009**. Effects of blue-stain fungi isolated from *Pinus oocarpa* in Nicaragua on southern pines. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. **2009**. Bark beetle activity related to biomass removal and standard silvicultural practices. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*Matusick, G. and Eckhardt, L.G. **2009**. Damage in southern pines following artificial inoculation with pathogenic root fungi, with emphasis on four *Leptographium* species. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*\*Walker, D., Matusick, G., and Eckhardt, L.G. **2009**. Host response to several root pathogenic fungi. Forest Health Cooperative Annual Meeting, Auburn, AL.

Sword-Sayer, M.A. and Eckhardt, L.G. **2009**. Pine decline from a physiology perspective. Forest Health Cooperative Annual Meeting, Auburn, AL.

\*Zanzot, J.W. and Eckhardt, L.G. **2009**. Seasonal changes in abundance of root-feeding curculionids and ophiostomatoid fungi at Fort Benning, Georgia. Forest Insects and Environmental Change: IUFRO Division 7 – Forest Health, Jackson Hole, WY.

\*Zanzot, J.W. and Eckhardt, L.G. **2009**. Assessment of longleaf pine on high-risk and low-risk loblolly pine decline sites at Fort Benning, Georgia. Expanding the Boundaries: 2009 APS Annual Meeting, Portland, OR.

Sword-Sayer, M.A., Eckhardt, L.G., Zanzot, J.W., and Carter, E.A. **2009**. Longleaf pine nutrition, decline symptoms, and root disease at Fort Benning Military Reserve. South-wide Forest Disease Workshop, Greenville, SC.

\*\*Walker, D., Matusick, G., Hossain, M., and Eckhardt, L. **2009**. Host response to several root pathogenic fungi. South-wide Forest Disease Workshops, Greenville, SC.

Menard, R.D., Eckhardt, L.G., Matusick, G., and Hess, N.J. **2009**. Monitoring loblolly pine decline in the western zone of the southern region. South-wide Forest Disease Workshop, Greenville, SC.

\*Matusick, G., Zanzot, J.W., and Eckhardt, L.G. **2009**. The occurrence, virulence, and potential origin of *Grossmannia huntii* isolated from southern *Pinus* host tissue and bark beetle vectors. South-wide Forest Disease Workshop, Greenville, SC.

**\*\*Walker, D., Matusick, G. Hossain, M., and Eckhardt, L.G. 2009.** Host response to several root pathogenic fungi. Sixth Annual Undergraduate Scholars Research Forum, Auburn University, AL.

**\*Matusick, G. and Eckhardt, L.G. 2009.** Damage associated with inoculation of mature longleaf and loblolly pine roots with four blue-stain *Leptographium* species. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL.

**\*Zanzot, J.W. and Eckhardt, L.G. 2009.** *Leptographium*, its vectors, and longleaf pine decline: Implications for longleaf restoration at Fort Benning, GA. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL.

**\*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. 2009.** Evaluation of stand health in association with biomass removal and standard silvicultural practices. Southeastern Entomological Society of America Annual Meeting, Montgomery, AL.

**\*Zanzot, J.W. and Eckhardt, L.G. 2009.** Ecology of root-feeding curculionids and fungi in longleaf pine forests at Fort Benning, Georgia. Southeastern Entomological Society of America Annual Meeting, Montgomery, AL.

**\*Matusick, G. and Eckhardt, L.G. 2009.** The pathogenicity of four *Leptographium* species to southern pine roots. 86<sup>th</sup> Annual Southern Division American Pathological Society Meeting, Atlanta, GA.

**\*Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. 2008.** *Leptographium serpens* and *Grosmannia huntii*: Recent introductions to southeastern forests? Forest Health Cooperative Annual Meeting, Auburn, AL.

**\*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. 2008.** Evaluation of stand health in association with biomass removal and standard silvicultural practices. Forest Health Cooperative Annual Meeting, Auburn, AL.

**\*Matusick, G. and Eckhardt, L.G. 2008.** The virulence and pathogenicity of root-inhabiting blue-stain fungi. Forest Health Cooperative Annual Meeting, Auburn, AL.

**\*Zelko, J.C., Menard, R.D., Matusick, G., and Eckhardt, L.G. 2008.** The assessment pathogenicity of Nicaraguan ophiostomatoid fungi on southern pines. Forest Health Cooperative Annual Meeting, Auburn, AL.

**\*Matusick, G. and Eckhardt, L.G. 2008.** The pathogenicity of four *Leptographium* species to southern pine roots. Graduate Student Scholars Forum, Auburn University, AL.

**\*Zanzot, J.W., Matusick, G., and Eckhardt, L.G. 2008.** Ecological and molecular data suggest *Leptographium serpens* is a recent introduction into the southeastern United States. Graduate Student Scholars Forum, Auburn University, AL.

**Menard, R.D., Eckhardt, L.G., Matusick, G., and Hess, N.J. 2008.** Monitoring loblolly pine decline in the western zone of the Southern region. South-wide Forest Disease Workshop, Savannah, GA.

**Eckhardt, L.G., Menard, R.D., and Gray, E. 2008.** Effects of oleoresins and terpenoids on the fungal growth associated with pine decline in the southeastern United States. South-wide Forest Disease Workshop. Savannah, GA.

- \*Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. **2008**. A PCR-RFLP based test to distinguish *Leptographium serpens* and *Leptographium huntii* from roots of declining pines in the southeastern US. South-wide Forest Disease Workshop. Savannah, GA.
- \*Matusick, G. and Eckhardt, L.G. **2008**. The pathogenicity of *Leptographium* species to southern pine roots. South-wide Forest Disease Workshop, Savannah, GA.
- Menard, R.D. and Eckhardt, L.G. **2007**. Pine decline in the southeastern United States and the involvement of bark beetles and Ophiostomatoid fungi. Western Gulf Forest Pest Management Cooperative Contact Meeting, Natchitoches, LA
- \*Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. **2007**. An RFLP based test to distinguish *Leptographium serpens* and *L. huntii*. Mycological Society of America Conference, Baton Rouge, LA.
- Menard, R., Eckhardt, L., and Hess, N., **2007**. Assessment of loblolly Pine on Fort Benning Military Reservation, Fort Benning, Georgia. Thirteenth Biennial Southern Silvicultural Research Conference, Athens, GA.
- \*Matusick, G., and Eckhardt, L.G. **2007**. Pathogenicity of *Leptographium* species to longleaf pine. Southern Appalachian Forest Entomologist/Pathologist Seminar. Crossnore, NC.
- Hess, N.J., Menard, R.D. and Eckhardt, L.G. **2006**. Assessment of loblolly pine decline and site conditions on Fort Benning Military Reservation, GA. Northeast and South-wide Forest Disease Workshop, Caanan Valley, WV
- Carter, E.A., Hess, N.J., Goddard, A., Eckhardt, L.G. and Jones, J.P. **2006**. Soil characteristics of loblolly decline sits in central Alabama. Northeast and South-wide Forest Disease Workshop, Caanan Valley, WV
- Eckhardt, L.G., Menard, R.D. and Hess, N.J. **2005**. *Leptographium* species and their vectors as components of loblolly pine decline: a growing concern in the southeastern United States. American Phytopathological Society Annual Meeting, Austin, TX
- Eckhardt, L.G., Menard, R.D., Hess, N.J., and Jones, J.P. **2005**. *Leptographium* species and southern pine decline. South-wide Forest Disease Workshop, Baton Rouge, LA
- Hess, N.J., Eckhardt, L.G., Menard, R.D., and Jones, J.P. **2005**. Monitoring *Leptographium* species and pine decline in the western zone of the southern region. South-wide Forest Disease Workshop, Baton Rouge, LA
- Menard, R.D., Eckhardt, L.G., and Jones, J.P. **2005**. Assessment of loblolly pine decline risk mapping system on Fort Benning military installation Ft. Benning Georgia. South-wide Forest Disease Workshop, Baton Rouge, LA.
- Eckhardt, L.G., Menard, R.D., and Jones, J.P. **2003**. Loblolly pine decline, *Leptographium* spp. and root - feeding insects. Southern Forest Insect Work Conference, New Orleans, LA
- Eckhardt, L.G., Menard, R.D., and Jones, J.P. **2003**. The use of GIS and topographical features to delineate loblolly pine decline in central Alabama. South-wide Forest Disease Workshop, Asheville, NC
- Eckhardt, L.G., Jones, J.P., Hess, N.J., and Carter, E. **2002**. Loblolly pine decline, *Leptographium* spp. and root -feeding insects. American Phytopathological Society Annual Meeting, Milwaukee, WI
- Eckhardt, L.G., Jones, J.P., and Hess, N.J., **2002**. *Leptographium* species and their vectors as components of loblolly pine decline. Southwide Forest Disease Workshop, Daytona Beach, FL.

*Poster Presentations at Professional Meetings (\*\*Undergraduate or \*Graduate Student)*

- \*Cole, A.B., Slippers, B., Liebold, A., and Eckhardt, L.G. **2016**. Effect of growth rate on *Amylostereum* spp. fungus by terpenes. Advisory Council Meeting, SFWS, Auburn University Auburn, AL
- \*Devkota, P., and Eckhardt, L.G. **2016**. Variation in Tolerance of *Pinus taeda* Families to Ophiostomatoid Fungi *Grosmannia huntii* and *Leptographium terebrantis*. Advisory Council Meeting, SFWS, Auburn University Auburn, AL
- \*Essien, C., Via, B.K., Cheng, G., Gallagher, T., McDonald, T. and Eckhardt, L. **2016**. Assessing the Sensitivity of Acoustic Tools to the effect of Moisture Content in Estimating Acoustic Velocity and Modulus of Elasticity of Loblolly Pine (*Pinus taeda*) families. This is Research: Student Symposium 2016. Auburn University, Auburn, AL
- \*Acquah, G.E., Via, B.K., Eckhardt L.G., Fasina, O.O., and Billor, N. **2016**. Near infrared based partial least squares regression models for predicting the strength and basic density of disease tolerant *Pinus taeda* families. Forest Products Advisory Board Meeting, Auburn, AL
- \*Essien, C., Via, B.K., Cheng, G., Gallagher, T., McDonald, T., Wang, X. and Eckhardt, L. **2016**. Acouto-mechanical response of fourteen year old suppressed loblolly pine (*Pinus taeda*) to variation in wood chemistry, microfibril angle and density. Forest Products Advisory Board Meeting, Auburn, AL
- \*Essien C, Via BK, Cheng G, Gallagher T, McDonald T and Eckhardt L. **2016**. Are Acoustic tools sensitive to moisture variations in juvenile wood of loblolly pine families? Forest Products Advisory Board Meeting, Auburn, AL
- \*Essien, C., Via, B.K., Cheng, G., and Eckhardt, L. **2016**. Effect of tracheid length and chemistry on acoustic velocity in determining the strength properties of juvenile wood of loblolly pine families. Forest Products Advisory Board Meeting, Auburn, AL
- \*Devkota, P., and Eckhardt, L.G. **2016**. Variation in tolerance of *Pinus taeda* families to ophiostomatoid fungi *Grosmannia huntii* and *Leptographium terebrantis*. Advisory Council Meeting, School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL
- \*Acquah G. E., Via B.K., Eckhardt L.G., Fasina O. O. and Billor N. **2016**. Rapid assessment of disease tolerant *Pinus taeda* families for strength, chemical and bioenergy applications using near infrared spectroscopy. Southeastern Society of American Foresters Annual Meeting, Auburn, AL
- \*Essien, C., Via, B.K., Eckhardt, L., Cheng, Q., Gallagher, T., McDonald, T., and Wang, X. **2016**. Acouto-mechanical response of fourteen year old suppressed loblolly pine (*Pinus taeda*) to variation in cellulose, hemicelluloses, lignin, microfibril angel and density. Southeastern Society of American Foresters Annual Meeting, Auburn, AL
- \*Cole, A.B., and Eckhardt, L.G. **2016**. Effect of growth rate on *Amylostereum* spp. fungus by terpenes. Southeastern Society of American Foresters Annual Meeting, Auburn, AL
- \*Devkota, P. and Eckhardt, L. **2016**. Susceptibility of various mature loblolly pine (*Pinus taeda* L.) families to root infecting fungi. Southeastern Society of American Foresters Annual Meeting, Auburn, AL

Nadel, R.L., Eckhardt, L.G., and Enebak, S.A. **2015**. A rapid PCR screening test for the presence of *Fusarium circinatum* on pine seed and planting material. Society of American Foresters National Convention, Baton Rouge, LA

\*Acquah G. E., Via B.K., Eckhardt L.G., Fasina O. O. and Billor N. **2015**. Rapid assessment of disease tolerant *Pinus taeda* families for strength, chemical and bioenergy applications using near infrared spectroscopy. Sigma Xi's Annual Meeting and Student Research Conference, Kansas City, MO

\*Cole, A.B., and Eckhardt, L.G. **2015**. Effect of Growth Rate on *Amylostereum* spp. Fungus by Terpenes. Society of American Foresters National Convention, Baton Rouge, LA

\*Essien, C., Via, B.K., Eckhardt, L., Cheng, Q., Gallagher, T., McDonald, T., and Wang, X. **2015**. Acousto-mechanical response of fourteen year old suppressed loblolly pine (*Pinus taeda*) to variation in cellulose, hemicelluloses, lignin, microfibril angle and density. Society of American Foresters National Convention, Baton Rouge, LA

\*Cole, A.B., Eckhardt, L.G., Liebhold, A., Slippers, B. **2015**. Prevalence of *Sirex noctilio* F. in Alabama Forests. Society of American Foresters National Convention, Baton Rouge, LA

\*Acquah G.E., Via B.K., Eckhardt L.G., Fasina O. and Billor N. **2015**. Application of NIRS in the screening of disease tolerant *Pinus taeda* families for chemistry, strength and bioenergy. Society of American Foresters National Convention, Baton Rouge, LA

\*Trautwig, A., Eckhardt, L., Loewenstein, N.J., Hoeksema, J., and Carter, E. **2015**. *Imperata cylindrica* reduces colonization by mycorrhizal fungi on *Pinus taeda* in commercial stands. Society of American Foresters National Convention, Baton Rouge, LA

\*Devkota, P., Eckhardt, L., Liu, K. and Kloepper, J. **2015**. Biological control of blue stain fungi by plant root growth promoting rhizobacteria (PGPR). Society of American Foresters National Convention, Baton Rouge, LA

\*Devkota, P., Eckhardt, L., and Singh, A. **2015**. Relative susceptibility of several loblolly pine (*Pinus taeda* L.) families to ophiostomatoid fungi. Society of American Foresters National Convention, Baton Rouge, LA

\*Devkota, P. and Eckhardt, L. **2015**. Susceptibility of various mature loblolly pine (*Pinus taeda* L.) families to root infecting fungi. Society of American Foresters National Convention, Baton Rouge, LA

\*Acquah G. E., Via B.K., Fasina O. O. and Eckhardt L.G. **2015**. Non-destructive prediction of the chemical and thermal reactivity properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. 19th International Nondestructive Testing and Evaluation of Wood Symposium, Rio de Janeiro, Brazil.

\*Acquah G.E., Via B.K., Eckhardt L.G., Fasina O. and Billor N. **2015**. Application of NIRS in the screening of disease tolerant *Pinus taeda* families for chemistry, strength and bioenergy. Sigma Xi's Student Research Conference, Kansas City, MO

\*Cole, A., Eckhardt, L., Liebold, A., and Slippers, B. **2015**. A survey for *Sirex noctilio* and native woodwasps in Alabama. This is Research: Student Symposium 2015. Auburn University, Auburn, AL

\*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. SFWS Annual Advisory Meeting Student Poster Session, Auburn University, Auburn, AL

- \*Devkota, P., Singh, A., Nadel, R. and Eckhardt, L. **2015**. Variance and tolerance of several loblolly pine (*Pinus taeda*) families to *Leptographium terebrantis* and *Grosmannia huntii* root fungi. SFWS Annual Advisory Meeting Student Poster Session, Auburn University, Auburn, AL
- \*Cole, A. and Eckhardt, L., Liebold, A., and Slippers, B. **2015**. Prevalence of *Sirex noctilio* F. in the southeastern United States. SFWS Annual Advisory Meeting Student Poster Session, Auburn University, Auburn, AL
- \*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of tropospheric ozone on loblolly pine seedlings inoculated with ophiostomatoid fungi. SFWS Annual Advisory Meeting Student Poster Session, Auburn University, Auburn, AL
- \*Acquah, G., Via, B.K., and Eckhardt, L.G. **2015**. Nondestructive estimation of the chemical and thermal properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. SFWS Annual Advisory Meeting Student Poster Session, Auburn University, Auburn, AL
- Sayer, M.A.S., Tyree, M.C. Blazier, M.A., Sung, S.S., and Eckhardt, L.G. **2015**. Is natural defense capacity correlated to the allocation of dry mass to the stem in loblolly pine? 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN
- \*Cole, A. and Eckhardt, L., Liebold, A., and Slippers, B. **2015**. A survey for *Sirex noctilio* and native woodwasps in Alabama. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN
- \*Devkota, P. and Eckhardt, L. **2015**. Variance and tolerance of several loblolly pine (*Pinus taeda*) families to *Leptographium terebrantis* and *Grosmannia huntii* root fungi. 18<sup>th</sup> Annual Biennial Southern Silvicultural Research Conference, Knoxville, TN
- \*Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invaded commercial *Pinus taeda* stands. Southeastern Society of American Foresters Annual Meeting, St Simons Island, GA
- \*Devkota, P., Singh, A., Nadel, R. and Eckhardt, L. **2015**. Variance and tolerance of several loblolly pine (*Pinus taeda*) families to *Leptographium terebrantis* and *Grosmannia huntii* root fungi. Southeastern Society of American Foresters Annual Meeting, St Simons Island, GA
- \*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of tropospheric ozone on loblolly pine seedlings inoculated with ophiostomatoid fungi. Southeastern Society of American Foresters Annual Meeting, St Simons Island, GA
- \*Cole, A. and Eckhardt, L., Liebold, A., and Slippers, B. **2015**. A survey of *Sirex noctilio* F. and native wood wasps in Alabama. Southeastern Society of American Foresters Annual Meeting, St Simons Island, GA
- \*Trautwig, A.N., Eckhardt, L.G., and Hoeksema, J.D. **2014**. Mycorrhizal Communities in *Imperata cylindrical* Invaded and Non-Invaded Commercial *Pinus taeda* Stands. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT
- \*Duong, T.A., de Beer, Z.W., Eckhardt, L.G., Wingfield, B.D., and Wingfield, M.J. **2014**. Taxonomy and population biology of *Grosmannia huntii sensu lato*. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT
- Eckhardt, L.G., \*Singh, A., Nadel, R. L., and Bauman, T.A. **2014**. Variation in resistance of *Pinus taeda* families against root infecting fungi. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, Utah.

Eckhardt, L.G., Ditchkoff, S.S., Duong, T., De Beer, Z.W., and Wingfield, M.J. **2014**. Two new ophiostomatoid species isolated from soil on snouts of feral hogs damaging pine roots in Georgia, USA. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

Eckhardt, L.G., Zanzot, J.W., \*Zeng, Y., \*Kidd, K.R., Bauman, T.A., and Nadel, R. L., **2014**. *Hylastes* population dynamics and forest health evaluation in association with thinning and fertilization. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Trautwig, A.N., \*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2014**. Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Piculell, B.J., Hoeksema, J.D., and Eckhardt, L.G. **2014**. The good and the bad: trade-offs between disease resistance and symbionts in loblolly pine. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Bauman, T.A., Eckhardt, L.G., Menard, R.D., Ward, J.D., and Sediles, A. **2014**. Evaluation of mortality in natural stands of *Pinus oocarpa* and *Pinus caribae* in Nicaragua. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Bauman, T.A., Matusick, G., Menard, R.D., and Eckhardt, L.G. **2014**. *Pinus taeda* roots represent a suitable host substrate for developing *Hylastes* spp. of bark beetles in Alabama, USA. XXIV IUFRO World Congress on “Sustaining Forests, Sustaining People: The Role of Research”, Salt Lake City, UT

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014**. Interaction of altered tropospheric ozone concentrations with loblolly pine decline. Southeastern Society of American Foresters Annual Meeting, Panama City, FL.

\*Bauman, T.A., Eckhardt, L.G., Menard, R.D., de Beer, Z.W., Sediles, A., and Wingfield, M.J. **2014**. Determining fungal communities associated with the bark beetle *Dendroctonus approximatus* in Mexico and Central America. Southeastern Society of American Foresters Annual Meeting, Panama City, FL.

\*Acquah, G., Via, B.K., and Eckhardt, L.G. **2014**. Nondestructive estimation of the chemical and thermal properties of forest biomass using vibrational spectroscopy and thermogravimetric analysis. Southeastern Society of American Foresters Annual Meeting, Panama City, FL.

\*Trautwig, A.N., Eckhardt, L.G., and Hoeksema, J.D. **2014**. Mycorrhizal Communities in *Imperata cylindrical* Invaded and Non-Invaded Commercial *Pinus taeda* Stands. Southeastern Society of American Foresters Annual Meeting, Panama City, FL.

\*Bauman, T.A., Eckhardt, L.G., Menard, R.D., Ward, J.D., and Sediles, A. **2014**. Evaluation of mortality in natural stands of *Pinus oocarpa* and *Pinus caribae* in Nicaragua. Southeastern Society of American Foresters Annual Meeting, Panama City, FL

\*Bauman, T.A., Matusick, G., Menard, R.D., and Eckhardt, L.G. **2014**. *Pinus taeda* roots represent a suitable host substrate for developing *Hylastes* spp. of bark beetles in Alabama, USA. Southeastern Society of American Foresters Annual Meeting, Panama City, FL

\*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014**. Interactions of altered rainfall concentrations with loblolly pine decline. Southeastern Society of American Foresters Annual Meeting, Panama City, FL



- \*Bauman, T.A., Eckhardt, L.G., Menard, R.D., Ward, J.D., and Sediles, A. **2014**. Evaluation of mortality in natural stands of *Pinus oocarpa* and *Pinus caribae* in Nicaragua. South-wide Forest Disease Workshop, Andalusia, AL.
- \*Acquah, G., Via, B., Eckhardt, L., and Fasina, O. **2014**. Screening loblolly pine families for wood chemistry. South-wide Forest Disease Workshop, Andalusia, AL
- \*Bauman, T.A., Matusick, G., Menard, R.D., and Eckhardt, L.G. **2014**. *Pinus taeda* roots represent a suitable host substrate for developing *Hylastes* spp. of bark beetles in Alabama, USA. South-wide Forest Disease Workshop, Andalusia, AL
- \*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2014**. Interactions of altered rainfall concentrations with loblolly pine decline. South-wide Forest Disease Workshop, Andalusia, AL
- \*Piculell, B.J., Hoeksema, J.D., and Eckhardt, L.G. **2013**. The good and the bad: trade-offs between disease resistance and symbionts in loblolly pine. 32<sup>nd</sup> New Phytologist Symposium on Plant interactions with other organisms: molecules, ecology and evolution. Buenos Aires, Argentina.
- \*Chieppa, J., Chappelka, A. and Eckhardt, L. **2013**. Interactions of future climate change scenarios of elevated tropospheric ozone and decreased rainfall amounts with loblolly pine decline. Joint American Phytopathological Society and Mycological Society of America Meeting, Austin, TX
- \*Brunson, B., Carter, E., Loewenstein, N., Enloe, S., and Eckhardt, L. **2013**. Assessing the impacts of cogongrass (*Imperata cylindrical* (L.) Beauv.) on root-feeding bark beetle populations associated with southern pine decline. FLEPPC/SE-EPPC Joint Annual Symposium, Panama City Beach, FL
- Neuman, R.D. and Eckhardt, L.G. **2013**. Next-generation volatile compound delivery system for control of insects and insect-borne diseases. Auburn University Research Week, Auburn University, AL
- \*Chieppa, J., Chappelka, A. and Eckhardt, L. **2013**. Interactions of future climate change scenarios of elevated tropospheric ozone and decreased rainfall amounts with loblolly pine decline. 23rd Annual Graduate Scholars Forum. Auburn University, AL
- \*Gougherty, A. and Eckhardt, L. **2013**. Assessing the competitive interaction between two groups of pathogenic root fungi. 23rd Annual Graduate Scholars Forum. Auburn University, AL
- \*Singh, A. and Eckhardt, L. **2013**. Variation in resistance of *Pinus taeda* and *Pinus elliotii* families against root infecting fungi. Southeastern Society of American Foresters Annual Meeting, Mobile, AL
- \*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2013**. Assessing the impacts of cogongrass (*Imperata cylindrical* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. Southeastern Society of American Foresters Annual Meeting, Mobile, AL
- \*\*Kelvin, S., Via, B.K., Jiang, W., and Eckhardt, L.G. **2012**. Rapid characterization and determination of wood chemistry and crytallinity index of loblolly pine. Frontiers in Biorefining 2012 Conference, St. Simons Island, GA
- Via, B.K. and Eckhardt, L.G. **2012**. Wood chemistry and pine decline susceptibility. Forest Health Cooperative Annual Advisory Meeting. Auburn, AL

Carter, E.A., Hess, N.J., Goddard, A.J., Eckhardt, L.G., and Via, B.K. **2012.** Soil characteristics of loblolly pine decline sites in central Alabama. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA

Sayer, M.A.S., Singh, A., Eckhardt, L.G., and Sung, S.S. **2012.** Carbon allocation as an indicator of *Leptographium* resistance in 15 loblolly pine families. . The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA

Eckhardt, L., Angle, C., and Steury, T. **2012.** EcoDog: Detection dogs for ecological research. . The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA

Eckhardt, L., Via, B., and Jiang., W. **2012.** Wood chemistry and disease resistance. . The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA

\*Zeng, Y. and Eckhardt, L. **2012.** Third row thinning effect on root-feeding beetle population dynamics and incidence of ophiostomatoid fungal species in decline-impacted loblolly pine stands. The Southern Forest Insect Work Conference and South-wide Forest Disease Workshop Joint Meeting, Charlottesville, VA

\*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2012.** Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. Joint Meeting of the 14<sup>th</sup> Annual Southeast Exotic Pest Plant Council Conference and the 10<sup>th</sup> Annual Alabama Invasive Plant Council Conference, Auburn, AL

\*Meyerpeter, M. and Eckhardt, L. **2012.** Mapping the extent of loblolly pine decline in the southeastern United States. Alabama Natural Resource Council Outreach Symposium. Auburn University, Auburn, AL

\*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2012.** Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. Alabama Natural Resource Council Outreach Symposium. Auburn University, Auburn, AL

\*Zeng, Y. and Eckhardt, L. **2012.** Third row thinning effect on root-feeding beetle population dynamics and incidence of ophiostomatoid fungal species in decline-impacted loblolly pine stands. Alabama Natural Resource Council Outreach Symposium. Auburn University, Auburn, AL

Anderson, D., Oak, S., Enebak, S., and Eckhardt, L. **2012.** Comparison of stream baiting protocols for recovering *Phytophthora ramorum* from streams and nursery discharge. Southeastern Society of American Foresters Annual Meeting, Jekyll Island, GA

\*Singh, A. and Eckhardt, L. **2012.** Variation in resistance of *Pinus taeda* and *Pinus elliotii* families against root infecting fungi. Alabama Natural Resource Council Outreach Symposium. Auburn University, Auburn, AL

\*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2012.** Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline. Southeastern Society of American Foresters Annual Meeting, Jekyll Island, GA

\*Zeng, Y. and Eckhardt, L. **2012.** Thinning effects on the incidence of ophiostomatoid fungal species in decline-impacted *Pinus taeda* stands. Southeastern Society of American Foresters Annual Meeting, Jekyll Island, GA

\*Meyerpeter, M. and Eckhardt, L. **2012.** Mapping the extent of loblolly pine decline in the southeastern United States. Southeastern Society of American Foresters Annual Meeting, Jekyll Island, GA

- \*Singh, A. and Eckhardt, L. **2012**. Variation in resistance of *Pinus taeda* and *Pinus elliotii* families against root infecting fungi. Southeastern Society of American Foresters Annual Meeting, Jekyll Island, GA
- \*Brunson, B.A., Carter, E.A. and Eckhardt, L.G. **2011**. Impact of cogongrass on populations of bark beetles associated with pine decline. IUFRO Forest Protection Joint Meeting, Colonia del Sacramento, Uruguay
- \*Zeng, Y. and Eckhardt, L.G. **2011**. Third row thinning effect on root-feeding beetle population dynamics and incidence of ophiostomatoid fungal species in decline-impacted loblolly pine stands. IUFRO Forest Protection Joint Meeting. Colonia del Sacramento, Uruguay
- \*Meyerpeter, M.B., and Eckhardt, L.G. **2011**. Mapping pine decline hazard sites in Alabama and Georgia. IUFRO Forest Protection Joint Meeting, Colonia del Sacramento, Uruguay
- \*Brunson, B.A. and Eckhardt, L.G. **2011**. Impacts of cogongrass on populations of bark beetles associated with pine decline. North American Forest Insect Work Conference, Portland, OR
- \*Meyerpeter, M.B. and Eckhardt, L.G. **2011**. Mapping the delineation of loblolly pine decline in the southeast. Graduate Scholars Forum, Auburn University, AL
- \*Brunson, B.A. and Eckhardt, L.G. **2011**. Impacts of cogongrass (*Imperata cylindrical* (L.) Beauv) on populations of root-feeding bark beetles associated with pine decline. Graduate Scholars Forum, Auburn University, AL
- \*Singh, A. and Eckhardt, L.G. **2011**. Resistance of *Pinus taeda* families against *Leptographium* root fungi and assessment of family morphological traits linked to *Leptographium* infection. Graduate Scholars Forum, Auburn University, AL
- \*Zeng, Y., Booker, K.R., and Eckhardt, L.G. **2011**. Association between bark beetle population dynamics and silviculture disturbances in decline-impacted loblolly pine stands. Sixteenth Biennial Southern Silvicultural Research Conference, Savannah, GA
- Eckhardt, L.G., Singh, A., Fischer, T., Angle, C., Dewitt, J., and Gillette, R. **2011**. Timber dogs and root disease. South-wide Forest Disease Workshop, Quincy, FL
- \*Zelko, J.C., Matusick, G., Menard, R.D., and Eckhardt, L.G. **2010**. An analysis of pathogenicity between Nicaraguan ophiostomatoid fungi versus native ophiostomatoid fungi in southern pines. Research Forum, Auburn University Hotel, Auburn University, AL
- \*Matusick, G. and Eckhardt, L.G. **2010**. Pathogenicity and virulence of *Leptographium* species to immature southern pines. Research Forum, Auburn University Hotel, Auburn University, AL
- \*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. **2010**. Root feeding insect populations in relation to multiple silvicultural practices. Research Forum, Auburn University Hotel, Auburn University, AL
- \*\*Walker, D., Matusick, G., Hossain, M., and Eckhardt, L. **2010**. Host Response to several root pathogenic fungi. Research Forum, Auburn University Hotel, Auburn University, AL
- \*Zeng, Y., Booker, K.R., and Eckhardt, L.G. **2010**. Association between bark beetle population dynamics and silviculture disturbances in decline-impacted loblolly pine stands. Research Forum, Auburn University Hotel, Auburn University, AL
- \*Zanzot, J.W. and Eckhardt, L.G. **2010**. Ecology of root-feeding curculionids and fungi in longleaf pine forests at Fort Benning, Georgia. Research Forum, Auburn University Hotel, Auburn University, AL

Eckhardt, L.G. and Menard, R.D. **2010**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. Research Forum, Auburn University Hotel, Auburn University, AL

Booker, K.R., Zanzot, J.W., and Eckhardt, L.G. **2010**. Thinning and fertilization: effects on bark beetle abundance in an industrial loblolly pine plantation. Research Forum, Auburn University Hotel, Auburn University, AL

Sword-Sayer, M.A., Eckhardt, L.G., and Carter, E.A. **2009**. Nutrition challenges of longleaf pine in the Southeast. Society of American Foresters National Convention, Orlando, FL

Eckhardt, L.G., Menard, R.D., and Gray, E. **2009**. Effects of oleoresins and terpenoids on fungi associated with pine decline. Society of American Foresters National Convention, Orlando, FL

**\*\*Walker, D., Matusick, G., Hossain, M., and Eckhardt, L. 2009. Host Response to several root pathogenic fungi. Society of American Foresters National Convention, Orlando, FL**

Menard, R.D., Eckhardt, L.G., Matusick, G., and Hess, N.J. **2009**. Monitoring loblolly pine decline in the southern region. Society of American Foresters National Convention, Orlando, FL

**\*Thompson, J.A., Menard, R.D., and Eckhardt, L.G. 2009. Root feeding insect populations in relation to multiple silvicultural practices. Society of American Foresters National Convention, Orlando, FL**

Menard, R.D. and Eckhardt, L.G. **2009**. Root-feeding bark beetles: what constitutes an epizootic event? Society of American Foresters National Convention, Orlando, FL

**\*Zanzot, J.W. and Eckhardt, L.G. 2009. Longleaf pine as an alternative species choice on high risk loblolly pine decline sites. Society of American Foresters National Convention, Orlando, FL**

**\*Zelko, J.C., Menard, R.D., Matusick, G., and Eckhardt, L.G. 2009. The effects of Nicaraguan ophiostomatoid fungi on southern pines. Society of American Foresters National Convention, Orlando, FL**

**\*Matusick, G. and Eckhardt, L.G. 2009. Pathogenicity and virulence of *Leptographium* species to immature southern pines. Society of American Foresters National Convention, Orlando, FL**

**\*Jackson, D.P., Enebak, S.A., South, D.B., and Eckhardt, L.G. 2009. *Pythium* species affect southern pine seedling survival after cold storage. Society of American Foresters National Convention, Orlando, FL**

**\*Matusick, G., Menard, R.D., and Eckhardt, L.G. 2009. Premature pine mortality, root-inhabiting bark beetles and their associated blue-stain fungi. Southeastern Forest Insect Work Conference, Gulfport, MS**

Booker, K.R., and Eckhardt, L.G. **2009**. Bark beetle population responses to harvest and thin treatments in loblolly pine stands in decline-impacted central piedmont region. Southeastern Forest Insect Work Conference, Gulfport, MS

**\*Thompson, J.A., Eckhardt, L.G., and Menard, R.D. 2009. Root-feeding bark beetle populations in association with stand health, biomass removal and standard silvicultural practices. Southeastern Forest Insect Work Conference, Gulfport, MS**

**\*Zanzot, J.W., Menard, R.D., and Eckhardt, L.G. 2009. *Hylastes* spp. and their fungal associates in longleaf pine stands at Fort Benning Georgia. Southeastern Forest Insect Work Conference, Gulfport, MS**

Menard, R.D. and Eckhardt, L.G. **2009**. Root-feeding bark beetles: what constitutes an epizootic event? Southeastern Forest Insect Work Conference, Gulfport, MS

Carter, E.A., Eckhardt, L.G., and Menard, R.D. **2009**. Select soil physical properties associated with loblolly pine decline at Fort Benning Military Reserve, Georgia. South-wide Forest Disease Workshop, Greenville, SC

\*Matusick, G. and Eckhardt, L.G. **2009**. Inoculation of loblolly and slash pine roots with four *Leptographium* species and *Heterobasidion annosum*. South-wide Forest Disease Workshop, Greenville, SC

\*Thompson, J.A., and Eckhardt, L.G., and Menard, R.D. **2009**. Forest health evaluation of stand health in association with biomass removal and standard silvicultural practices. South-wide Forest Disease Workshop, Greenville, SC

\*Zanzot, J.W. and Eckhardt, L.G. **2009**. Beetle-fungal associations in longleaf pine stands at Fort Benning, GA. South-wide Forest Disease Workshop, Greenville, SC

\*Zelko, J.C., Matusick, G., Menard, R.D., and Eckhardt, L.G. **2009**. An analysis of pathogenicity between Nicaraguan ophiostomatoid fungi versus native ophiostomatoid fungi in southern pines. South-wide Forest Disease Workshop, Greenville, SC

Eckhardt, L.G., Menard, R.D., and Gray, E. **2009**. Effects of oleoresins and terpenoids on the fungal growth associated with pine decline in the southeastern United States. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL

\*Matusick, G. and Eckhardt, L.G. **2009**. The pathogenicity and virulence of southeastern blue-stain *Leptographium* species to southern pine seedlings and immature longleaf pine trees. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL

Carter, E.A., Eckhardt, L.G., and Menard, R.D. **2009**. Select soil physical properties associated with loblolly pine decline at Fort Benning Military Reserve, Georgia. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL.

Sword-Sayer, M.A., Eckhardt, L.G., and Carter, E.A. **2009**. Longleaf pine nutrition and decline symptoms at Fort Benning Military Reserve-their application in responding to pine decline in the Southeast. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL

\*Zanzot, J.W., de Beer, Z.W., Wingfield, M.J., and Eckhardt, L.G. **2009**. Ecological and molecular evidence suggests that *Leptographium serpens* is a recent introduction to southeastern forests. Annual Symposium of the Southeastern Chapter of the Society for Ecological Restoration: Restoration in the Southeast with a Focus on Military Lands, Auburn, AL

\*Zanzot, J.W. and Eckhardt, L.G. **2009**. Ecology of root-feeding curculionids and fungi in longleaf pine forests at Fort Benning, Georgia. Southeastern Entomological Society of America Annual Meeting, Montgomery, AL

\*Matusick, G., Eckhardt, L.G., and Menard, R.D. **2009**. Premature pine mortality, root-inhabiting bark beetles and blue-stain fungi. Southeastern Entomological Society of America Annual Meeting, Montgomery, AL

\*Zelko, J.C., Menard, R.D., Matusick, G., and Eckhardt, L.G. **2009**. The assessment pathogenicity of Nicaraguan ophiostomatoid fungi on southern pines. Graduate Student Scholars Forum, Auburn, AL

\*Matusick, G., Eckhardt, L.G., and Menard, R.D. **2008**. Premature pine mortality, root-inhabiting bark beetles and blue-stain fungi. Southeastern Society of American Foresters Annual Meeting, Calloway Gardens, GA

Sword-Sayer, M.A. and Eckhardt, L.G. **2008**. Relationship between pine decline symptomology and mineral nutrition at Fort Benning Military Reserve. 93<sup>rd</sup> Ecological Society of America Annual Meeting, Milwaukee, WI

Imm, D.W., Eckhardt, L.G., and Sword-Sayer, M.A. **2008**. What is pine decline in the southeastern United States and how widespread is it? 93<sup>rd</sup> Ecological Society of America Annual Meeting, Milwaukee, WI

\*Thompson, J.A. and Eckhardt, L.G. **2008**. Forest health evaluation of stand health in association with biomass removal and standard silvicultural practices. Graduate Student Forum, Auburn University, AL

\*Matusick, G., Eckhardt, L.G., and Enebak, S.A. **2008**. The pathogenicity of *Leptographium serpens* to pine seedlings under varying moisture regimes. Graduate Student Forum, Auburn University, AL

Carter, E.A., Hess, N.J., Goddard, A.J., Eckhardt, L.G. and Jones, J.P. **2008**. Soil characteristics of loblolly decline sites in Alabama. South-wide Forest Disease Workshop, Savannah, GA

Sword-Sayer, M.A., Sung, S.J.S., and Eckhardt, L.G. **2008**. Observations of longleaf pine fine root and branch health across sixteen locations at Fort Benning Military Reserve. South-wide Forest Disease Workshop, Savannah, GA

\*Matusick, G., Eckhardt, L.G., and Enebak, S.A. **2008**. The pathogenicity of *Leptographium serpens* to longleaf pine seedlings under varying moisture regimes, South-wide Forest Disease Workshop, Savannah, GA

\*\*Fogg, T.D., Matusick, G., and Eckhardt, L.G. **2008**. Effects of different pine tissues on effects of pathogenic fungi. South-wide Forest Disease Workshop, Savannah, GA

\*Zanzot, J.W., Eckhardt, L.G., and Menard, R.D. **2008**. Seasonal variation in root-feeding insect capture and fungal infestation in longleaf pine at Fort Benning GA. South-wide Forest Disease Workshop, Savannah, GA

\*Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. **2008**. A new *Ophiostoma* species in the *O. pluriannulatum* complex from loblolly pine roots. South-wide Forest Disease Workshop, Savannah, GA

Menard, R.D., Eckhardt, L.G., Matusick, G., and Hess, N.J. **2007**. Monitoring loblolly pine decline in the western zone of the Southern region. Society of American Foresters National Convention. Portland, OR

\*Zanzot, J.W., Eckhardt, L.G., and Menard, R.D. **2007**. Seasonal variation in capture of root-feeding insects in longleaf pine stands at Fort Benning Georgia. Society of American Foresters National Convention. Portland, OR

\*Matusick, G., Eckhardt, L.G., and Menard, R.D. **2007**. The pathogenicity of four *Leptographium* species to mature loblolly and longleaf pine roots. Society of American Foresters National Convention. Portland, OR

- \*Zanzot, J.W., and Eckhardt, L.G. **2007**. Seasonal variation in capture of root-feeding insects in longleaf pine stands at Fort Benning Georgia. Southeastern Society of American Foresters Annual Meeting, Destin. FL
- \*Matusick, G., Eckhardt, L.G., and Menard, R.D. **2007**. The pathogenicity of four *Leptographium* species to mature loblolly and longleaf pine roots. Southeastern Society of American Foresters Annual Meeting, Destin. FL
- \*Zanzot, J.W., de Beer, Z.W., Eckhardt, L.G., and Wingfield, M.J. **2007**. A new *Ophiostoma* species in the *O. pluriannulatum* complex from loblolly pine roots. Mycological Society of America Conference, Baton Rouge, LA
- \*Matusick, G., Eckhardt, L.G., and Enebak, S.A. **2006**. Pathogenicity of *Leptographium serpens* to longleaf pine. Sixth Longleaf Alliance Regional Conference, Tifton, GA
- Addington, R.N., Harrison, W.C., Eckhardt, L.G., Menard, R.D., and Doresky, J.K. **2006**. Monitoring of upland pine tree vigor and mortality on Fort Benning, GA/AL Forest Health Monitoring Work Group Meeting, Charleston, SC
- Hess, N.J., Eckhardt, L.G., Menard, R.D., and Jones, J.P. **2005**. Monitoring loblolly pine decline in the western zone of the southern region. American Phytopathological Society Annual Meeting, Austin, TX
- Menard, R.D. and Eckhardt, L.G. **2005**. Assessment of loblolly pine decline risk mapping system on Fort Benning military installation. American Phytopathological Society Annual Meeting, Austin, TX
- Eckhardt, L.G. and Menard, R.D. **2005**. Validating a methodology for evaluation southern pine beetle hazard applying southern pine decline hazard at the landscape level. Society of American Foresters National Convention, Fort Worth, TX
- Eckhardt, L.G. and Menard, R.D. **2005**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. Society of American Foresters National Convention, Fort Worth, TX
- Eckhardt, L.G., Menard, R.D. Jones, J.P., and Hess, N.J. **2005**. *Leptographium* species and their vectors as components of loblolly pine decline: a growing concern in the southeastern United States. Society of American Foresters National Convention, Fort Worth, TX
- Eckhardt, L.G. and Menard, R.D. **2005**. Validating a methodology for evaluation southern pine beetle hazard applying southern pine decline hazard at the landscape level. South-wide Forest Disease Workshop, Baton Rouge, LA
- Eckhardt, L.G. and Menard, R.D. **2005**. The use of GIS and topographical features to delineate southern pine decline in the southeastern united states. South-wide Forest Disease Workshop, Baton Rouge, LA
- Eckhardt, L.G. and Menard, R.D. **2005**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. South-wide Forest Disease Workshop, Baton Rouge, LA
- Walkinshaw, C.H., Eckhardt, L.G., Hess, N.J., and Otrosina, W.J. **2005**. Necrosis of resin ducts in roots of loblolly pines in decline. South-wide Forest Disease Workshop, Baton Rouge, LA
- Carter, E.A., Hess, N.J., Goddard, A.J., Eckhardt, L.G., and Jones, J.P. **2005**. Soil characteristics of loblolly decline sites in central Alabama. South-wide Forest Disease Workshop, Baton Rouge, LA

- Eckhardt, L.G. and Menard, R.D. **2005**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. Fifth Longleaf Alliance Regional Conference, Hattiesburg, MS
- Eckhardt, L.G. and Menard, R.D. **2005**. The use of GIS and topographical features to delineate southern pine decline in the southeastern United States. Fifth Longleaf Alliance Regional Conference, Hattiesburg, MS
- Eckhardt, L.G., Menard, R.D., Jones, J.P., and Hess, N.J. **2005**. *Leptographium* species and their vectors as components of loblolly pine decline: a growing concern in the southeastern United States. Fifth Longleaf Alliance Regional Conference, Hattiesburg, MS
- Eckhardt, L.G. and Menard, R.D. **2005**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. Thirteenth Biennial Southern Silvicultural Research Conference, Memphis, TN
- Eckhardt, L.G., Menard, R.D., Jones, J.P., and Hess, N.J. **2005**. *Leptographium* species and their vectors as components of loblolly pine decline: a growing concern in the southeastern United States. Thirteenth Biennial Southern Silvicultural Research Conference, Memphis, TN
- Eckhardt, L.G. and Menard, R.D. **2004**. The use of GIS and topographical features to delineate southern pine decline in the southeastern United States. 4<sup>th</sup> Southern Forestry and Natural Resources GIS Conference, Athens, GA
- Eckhardt, L.G. and Menard, R.D. **2004**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. 4<sup>th</sup> Southern Forestry and Natural Resources GIS Conference, Athens, GA
- Eckhardt, L.G., Menard, R.D., Jones, J.P., and Hess, N.J. **2004**. *Leptographium* species and their vectors as components of loblolly pine decline: a growing concern in the southeastern United States. Fifth Longleaf Alliance Regional Conference, Hattiesburg, MS
- Eckhardt, L.G. and Menard, R.D. **2004**. The use of GIS and topographical features to delineate southern pine decline in the southeastern United States. Fifth Longleaf Alliance Regional Conference, Hattiesburg, MS
- Eckhardt, L.G. and Menard, R.D. **2004**. Actively managing real & potential loblolly pine decline stands targeted for longleaf restoration within RCW habitat. Fifth Longleaf Alliance Regional Conference, Hattiesburg, MS
- Eckhardt, L.G. and Menard, R.D. **2003**. The use of ecological factors and GIS in the delineation of Loblolly pine decline in central Alabama. Twelfth Biennial Southern Silvicultural Research Conference, Biloxi, MS
- Eckhardt, L.G., Jones, J.P., Hess, N.J., Menard, R.D., and Carter, E.A. **2003**. Loblolly pine decline, *Leptographium* spp. and root-feeding insects. Twelfth Biennial Southern Silvicultural Research Conference, Biloxi, MS
- Smith, M.O., Hess, N.J., Gulick, S., Eckhardt, L.G., and Menard, R.D. **2003**. The use of hyperspectral imaging for forest health monitoring. Twelfth Biennial Southern Silvicultural Research Conference, Biloxi, MS
- Carter, E.A., Hess, N.J., Goddard, A.J., Otrosina, W.J., Jones, J.P., Eckhardt, L.G., and Weber, A.M. **2003**. Soil characteristics of loblolly pine decline sites in central Alabama. Twelfth Biennial Southern Silvicultural Research Conference, Biloxi, MS



Eckhardt, L.G., Jones, J.P., Hess, N.J., Menard, R.D., and Carter, E.A., **2003**. Loblolly pine decline, *Leptographium* spp. and root -feeding insects. Forest Health Monitoring Work Group Meeting, Monterey, CA

Eckhardt, L.G., Jones, J.P., and Hess, N.J. **2002**. *Leptographium* species and their vectors as components of loblolly pine decline. Louisiana State University, Graduate Student Association Annual Intellectual Gumbo Poster Symposium, Baton Rouge, LA

Eckhardt, L.G., Jones, J.P., Hess, N.J., and Carter, E.A. **2002**. *Leptographium* species as components of loblolly pine decline. Forest Health Monitoring Work Group Meeting, New Orleans, LA

Eckhardt, L.G., Jones, J.P., Hess, N.J., Carter, E.A., and Steinman, J. **2001**. *Leptographium* species and their vectors as components of loblolly pine decline. American Phytopathological Society Annual Meeting, Salt Lake City, UT

Eckhardt, L.G., Jones, J.P., Hess, N.J., Carter, E.A., and Steinman, J. **2001**. *Leptographium* species a component of loblolly pine decline. Root and Butt Rots 10<sup>th</sup> International Conference, Quebec, Canada

Hess, N.J., Otrosina, W.J., Carter, E.A., Steinman, J., Jones, J.P., Eckhardt, L.G., Weber, A., and Walkinshaw, C. **2001**. Assessment of loblolly pine decline in central Alabama. Root and Butt Rots 10<sup>th</sup> International Conference, Quebec, Canada

Bauman T.A., Eckhardt, L.G., Goyer, R.A., and Klepzig, K.D. **2000**. Interactions of fire, insects and root pathogens in longleaf pine. Third Longleaf Alliance Regional Conference, Alexandria, LA

Eckhardt, L.G., Goregaoker, S.P., and Culver, J.N. **1999**. Regions of the tobacco mosaic tobamovirus replicase gene that mediate resistance.” American Society of Virology Conference, Amherst, MA

Eckhardt, L.G. and Culver, J.N. **1997**. Virus disassembly: importance of coat protein-RNA interactions. Howard Hughes Medical Institute Undergraduate Research Fellowship Poster Session, College Park, MD

## **OTHER RESEARCH CONTRIBUTIONS:**

### *Regional Programs*

2010-Present Co-Director (with Scott Enebak) State Sudden Oak Death (SOD) State Laboratory for Alabama and Mississippi

2009-2011 Collaboration with Don Grosman (Forest Pest Management Cooperative, Lufkin Texas) and Arborjet investigating the efficacy of a systemic insecticide injected into longleaf, loblolly, shortleaf and slash against ophiostomatoid fungi and root-feeding bark beetles associated with the pine decline complex.

2008-Present Director and Co-Founder (with Scott Enebak) of the Forest Health Cooperative at Auburn University School of Forestry and Wildlife Sciences.

### *National Programs*

2009-2010 Member of Working Group – MRP Project W-1187 Interactions among bark beetles, pathogens, and conifers in North American Forests.

## *International Programs*

- |           |   |
|-----------|---|
| 2015-2019 | Coordinator of IUFRO Working Group WP 7.02.06 Disease/Environment Interactions in Forest Decline under Research Group RG 7.02.00 Pathology in IUFRO Division 7  |
| 2014-2016 | Collaboration with Drs. Wilhelm de Beer and Mike Wingfield, Forestry and Agriculture Biotechnology Institute (FABI) to describe several new species of <i>Ophiostoma</i> found in the southeastern US that have been associated with insects, and pine roots. A Ph.D. student Tessa Bauman will be assisting in this effort. The collections of world-wide species of these fungi are located at the Forestry and Agricultural Biotechnology Institute (FABI) in South Africa.  |
| 2014-2016 | Collaboration with Dr. Bernard Slippers (Director Biocontrol Programme, Forestry and Agriculture Biotechnology Institute (FABI), South Africa) to look at <i>Sirex</i> populations in Alabama and what their relationship is with declining pine across the State. To identify if <i>Sirex noctillo</i> is present in Alabama along with its fungal symbionts and nematodes. FABI will provide training for a Masters student in <i>Sirex</i> identification, dissection for nematodes, culturing fungus and nematodes November 2014. FABI will provide training, facilities, room and board for Masters student May 2015 and 2016 for molecular work related to the project. Field training will be provided by Dr. Juan Corley of Grupo de Ecologia de Poblaciones de Insectos in Argentina.  |
| 2013-2015 | Collaboration with Dr. Tammy Swain (Programme Manager for Tree Improvement) and Dr. Ryan Nadel (Project Leader of the Integrated Pest Management (IPM) project) at the Institute for Commercial Forestry Research (ICFR) and Dr. Brian Via (Director of the Forest Products Development Center). Dr. Eckhardt and Dr. Via are to assist with the development of NIR procedures to help predict disease susceptibility in <i>Eucalyptus</i> and <i>Pinus</i> species in South Africa. Dr. Via will train ICFR staff in NIR calibration and analysis.   |
| 2012-2014 | Collaboration with Dr. Ilaria Germishuizen (GIS specialist at the ICFR) and Dr. Ryan Nadel (Project Leader of the Integrated Pest Management (IPM) project) at the Institute for Commercial Forestry Research (ICFR). Dr. Eckhardt is to assist with the development of pest and pathogen risk maps for South Africa and will provide advice and experience in assessing several site and silvicultural variables used in the development of the risk maps. Dr. Ryan Nadel and Dr. Ilaria Germishuizen will provide spatial technologies experience and the data for the selected pests and pathogens that currently impact forest productivity in South Africa. It is envisaged that the risk maps developed will eventually be used to determine the establishment risk of potential pests/pathogens between the South-eastern US and South Africa. |
| 2011-2015 | Collaboration with Dr. Michael Wingfield, Dr. Brenda Wingfield and Wilhelm de Beer to elucidate the taxonomy and population genetics of <i>Leptographium huntii</i> (possible exotic) insect-vectored root-infecting bluestain fungi that have the potential of threatening the longleaf ecosystem and RCW habitat. Dr. Wingfield is providing the European and South African collections of <i>Leptographium</i> for comparison to the southeastern US isolates and lending his expertise and laboratory to the project. A Ph.D. student at FABI Tuan Duong will be assisting in this effort.  |
| 2009-2014 | Collaboration with Dr. Michael Wingfield, Dr. Brenda Wingfield and Wilhelm de Beer to elucidate the population genetics of <i>Leptographium serpens</i> (possible exotic) an insect-  |

vectored root-infecting bluestain fungus that has the potential of threatening the longleaf ecosystem and RCW habitat. Dr. Wingfield is providing the European and South African collections of *Leptographium* for comparison to the southeastern US isolates and lending his expertise and laboratory to the project. A Ph.D. student at FABI Tuan Duong will be assisting in this effort.

- 2009-2015 Collaboration with Wilhelm de Beer (FABI) to describe several new species of *Ophiostoma* found in the southeastern US that have been associated with insects, soil, pine roots, and feral hog snouts. The collections of world-wide species of these fungi are located at the Forestry and Agricultural Biotechnology Institute (FABI) in South Africa.
- 2008-2016 Collaboration with Alberto Sediles at Universidad Nacional Agraria (UNA) to work out the decline of *Pinus caribaea* and *Pinus oocarpa* in the San Fernando district of Nicaragua. Mr. Sediles is an entomologist and the head of the Forest Health Protection task group and we are working in conjunction with Forest Health Protection of the US Forest Service in Atlanta Georgia and Pineville Louisiana. We are working on insect and fungal involvement and identification. We will also be collaborating with Dr. Mike Wingfield on the identification of the fungi (sequencing of ophiostomatoid fungi). A Ph.D. student at FABI/Auburn Tessa Bauman will be assisting in this effort.
- 2005-2009 Collaboration with Dr. Michael Wingfield and Wilhelm de Beer to elucidate the taxonomy of *Leptographium serpens* an insect-vectored root-infecting bluestain fungus that has the potential of threatening the longleaf ecosystem and RCW habitat. Dr. Wingfield the Director of FABI (Forestry and Agricultural Biotechnology Institute) will be hosting my PhD student (James Zanzot) in his laboratory for 8 months to do the genetic analysis and contributing supplies, working space and living quarters while James is working in South Africa. Dr. Wingfield is providing the European and South African collections of *Leptographium* for comparison to the southeastern US isolates and lending his expertise and laboratory to the project. Dr. Wingfield will also be serving on the students committee.
- 2003-2006 Collaboration with Drs. Karin Jacobs and Wilhelm de Beer to describe a new species of *Leptographium* and *Ophiostoma* found in the southeastern US. The collections of world-wide species of these fungi are located at the Forestry and Agricultural Biotechnology Institute (FABI) in South Africa. Both Drs. Jacobs and de Beer work at FABI in cooperation with Dr. Mike Wingfield.

#### PROFESSIONAL ORGANIZATIONS AND MEMBERSHIPS:

2010 to Present	Member Principle Investigators Association (PIA)
2010 to Present	Member Alabama SOD Task Force
2010 to Present	Member of Auburn University Ecology Group
2010 to 2011	Chair, Mentor Committee, Southeastern Division, Society of American Foresters
2009 to Present	Member, Southeast Region Local Nominating Committee, Sigma Xi
2008 to Present	President, Auburn University Chapter, Sigma Xi
2008 to Present	Member of Society of Women in Sciences and Mathematics
2008 to Present	Member of Ecological Society of America
2008 to Present	Secretary Southwide Forest Disease Workshop
2007 to Present	Member of CMB Graduate Faculty at Auburn University
2003 to Present	Member of Society of American Foresters
2001 to Present	Member of Entomological Society of America
2000 to Present	Member of American Phytopathological Society
2000 to Present	Member of Mycological Society of America

2000 to Present	Member of Sigma Xi
2000 to 2003	President – Plant Pathology Graduate Student Association – LSU
1998 to 1999	President Alpha Chi Sigma - Alpha Rho Chapter - National Co-ed Chemistry Fraternity
1997 to 1998	Vice-President Alpha Chi Sigma -Alpha Rho Chapter – National Co-ed Chemistry Fraternity
1997 to Present	Member of Alpha Chi Sigma - National Co-ed Chemistry Fraternity
1993 to 1999	Girl Scout Troop Leader

#### PROFESSIONAL SERVICE:

2015-2016	FFA Forestry Career Event Workshop Instructor, Forest Insect and Disease, AL
2010	Committee Member, SFWS Dean Search Committee
2010	Chair, Mentor Committee, South Eastern Division, Society of American Foresters
2009	Co-Established (with Brian Via) a weekly seminar series in the School of Forestry and Wildlife Sciences
2009	Mentor – 2009 Undergraduate Research Program, Auburn, AL
2009	Camp War Eagle Faculty Honoree, Auburn, AL
2006-2016	4-H Forestry Mentor and Judge, AL
2006-2016	Judge for the Graduate Student Research Forum, Auburn AL
2004-2005	Judge for the Louisiana State University, Graduate Student Association Annual Intellectual Gumbo Poster Symposium, Baton Rouge, LA
2004-Present	Reviewer for Plant Pathology, Forest Science, Plant Disease, Southern Journal of Applied Forestry, and Canadian Journal of Botany
2000-02	President LSU Plant Pathology Graduate Student Association
2000-01	Vice-President LSU Entomology Club
1999-04	Guest Speaker, Middle School Science Classes, Forestry and Entomology
1997-04	Science Fair Judge, Middle and High School
1998-99	President Alpha Chi Sigma - Alpha Rho Chapter - National Co-ed Chemistry Fraternity
1997-98	Vice-President Alpha Chi Sigma -Alpha Rho Chapter - National Co-ed Chemistry Fraternity
1993-99	Girl Scout Troop Leader

#### HONORS AND AWARDS:

Outstanding Extension Paper Award, South-wide Forest Disease Workshop, Quincy, FL 2011

Outstanding Pathology Research Paper Award, South-wide Forest Disease Workshop, Quincy, FL 2011

Appreciation Award, Appreciation for Participation in the Job Shadow Program, Junior Achievement and Alabama Cooperative Extension System, Auburn, AL 2007

Appreciation Award, Appreciation for Research Efforts in Defining the Role of *Leptographium* in Loblolly Decline, United States Department of Agriculture, United States Forest Service, Forest Health Protection, Pineville, LA, 2005

Outstanding Poster Award, Second Place, 4<sup>th</sup> Southern Forestry and Natural Resources GIS Conference, Athens, GA 2005

Distinguished Dissertation Finalist, College of Agriculture, Louisiana State University, Baton Rouge, LA 2004

C. W. Edgerton Honor Award, Outstanding Performance as a Graduate Student, Department of Plant Pathology & Crop Physiology, Louisiana State University, Baton Rouge, LA 2003

Outstanding Student Research Paper Award, South-wide Forest Disease Workshop, Asheville, NC 2003

Outstanding Student Research Paper Award, Louisiana State University, Graduate Student

Association Annual Intellectual Gumbo Poster Symposium, Baton Rouge, LA, 2002  
 Outstanding Student Research Paper Award, South-wide Forest Disease Workshop, Daytona Beach, FL 2002  
 Outstanding Student Research Paper Award, Louisiana State University, Graduate Student Association Annual Intellectual Gumbo Poster Symposium, Baton Rouge, LA 2001  
 Certificate of Appreciation, Participation in the Evaluation Monitoring Project, Assessment of Loblolly Pine Decline in Central Alabama, United States Department of Agriculture, United States Forest Service, Forest Health Protection, Pineville, LA 2001  
 Outstanding Student Research Paper, Howard Hughes Medical Institute Undergraduate Research Fellowship Poster Session, University of Maryland, College Park, MD 1996  
 Howard Hughes Medical Institute Undergraduate Research Fellowship, University of Maryland, College Park, MD 1996  
 Alpha Chi Sigma, National Co-ed Chemistry Fraternity, University of Maryland, College Park, MD 1995  
 Golden Key National Honor Society, Wayne State University, Detroit, MI 1993  
 Society of Distinguished American High School Students, Marshall Academy, Holly Springs, MS 1982