LORI GIGET ECKHARDT

Professor & Director School of Forestry and Wildlife Sciences Auburn University, AL 36849-5418 (334)844-2720 or (334)844-1058 eckhalg@auburn.edu

PROFESSIONAL EXPERIENCE:

- 10/08 Present *Professor*, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL. Responsible for research in the area of forest health with emphasis on southern pines, pine decline, ophiostomatoid species and their vectors, sustainable habitat studies, and GIS risk mapping. *Joint Appointment in the Department of Entomology and Plant Pathology, College of Agriculture, Auburn University*
- 07/12 07/15 Associate Professor, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL. Responsible for research in the area of forest health with emphasis on southern pines, pine decline, ophiostomatoid species and their vectors, sustainable habitat studies, and GIS risk mapping. Joint Appointment in the Department of Entomology and Plant Pathology, College of Agriculture, Auburn University
- 08/10 07/12 Associate Research Professor, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL. Responsible for research in the area of forest health with emphasis on southern pines, pine decline, ophiostomatoid species and their vectors, sustainable habitat studies, and GIS risk mapping. Joint Appointment in the Department of Entomology and Plant Pathology, College of Agriculture, Auburn University
- 10/08 Present *Director*, Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL. Responsible for leading and organizing applied, problem solving research dealing with forest health, disease and insect pests, and invasive species that benefits the members of the Cooperative.
- 07/05 08/10 Assistant Research Professor, Integrated Forest Pathology/Forest Entomology, School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL. Responsible for research in the area of forest health with emphasis on southern pines, pine decline, Leptographium species and their vectors, sustainable habitat studies, and GIS risk mapping.
- 07/05 08/07 *Adjunct Assistant Professor*, Louisiana State University Agricultural Center, Department of Plant Pathology and Crop Physiology, LOUISIANA STATE UNIVERSITY, Baton Rouge, LA.
- 01/04 07/05 *Postdoctoral Researcher*, Forest Pathology/Forest Entomology, Louisiana State University Agricultural Center, Department of Plant Pathology and Crop Physiology, LOUISIANA STATE UNIVERSITY, Baton Rouge, LA. Responsible for the

coordination and supervising of southern pine decline and GIS risk mapping studies, Leptographium species and vector studies, and sustainable habitat studies for RCW.

- 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. Responsible for loblolly pine decline and GIS risk mapping studies, Leptographium species and vector studies, and sustainable habitat studies for RCW.
- 08/99 07/03 *Graduate Research Associate*, LOUISIANA STATE UNIVERSITY, Baton Rouge, LA. Double Major Field: Forest Pathology and 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

AUBURN UNIVERSITY, Auburn, AL Courses: Forest Health, Forest Health Lab

Associate Professor, Spring 2014, 2015 AUBURN UNIVERSITY, Auburn, AL

Course: 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 (Flagship Course)

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

COURSES AND CURRICULA DEVELOPED

FOWS 4980, *Undergraduate Research* – Trains undergraduates in the scientific method, data collection, analysis and reporting as they work on projects tailored to their interests.

FORY 5151/6151, *Forest Health Laboratory* – Deals with forest insect and disease identification, signs and symptoms.

FORY 7910, *Forest Health Laboratory Teaching Practicum* – Addresses the practical and theoretical issues of laboratory learning and facilitating the skills of pedagogy. Cocreator: Scott Enebak

FORY 7930, *Forest Tree Disease and Insect Diagnosis and Management* – Deals with the diagnosis of insect and disease problems in a forest setting, including information gathering, sampling, and diagnostics.

FORY 7930, *Advanced Forest Health Diagnostics Laboratory* – Deals with the diagnostics of forest health problems, working with clients, reporting and recommendations.

PLHL 7067, *Professionalism in the Plant Sciences* – Deals with grant writing, teaching, course planning, networking. All graduate students in the plant pathology department are required to take at LSU. Co-creator: Marc Cohn

STUDENT/SCIENTIST TRAINING:

Doctor of Philosophy (Ph.D.) Students

T. Bauman 2014 – current (Co-advisor)

Dissertation:

P. Devkota 2014 – current

Dissertation:

G. Matusick 2006 - 2010

Dissertation: Pathogenicity and virulence of root-inhabiting ophiostomatoid fungi on *Pinus* species of the southeastern United States.

J. Zanzot 2006 - 2009

Dissertation: Biology and ecology of root-feeding beetles and ophiostomatoid fungi in sandhills longleaf pine stands.

Masters of Science (M.S.) Students

A. Cole 2014 – present

Thesis:

A. Trautwig 2013 – present

Thesis:

J. Cheippa 2013 – 2015 (Co-advisor)

Thesis: Interaction of future climate change scenarios of elevated tropospheric ozone and altered rainfall on loblolly pine seedlings inoculated with ophiostomatoid fungi.

B. Brunson 2010 - 2013

Thesis: Assessing the impacts of cogongrass (*Imperata cylindrica* (L.) Beauv) on root-feeding bark beetle populations associated with southern pine decline.

M. Meyerpeter 2010 – 2012

Thesis: Creating a risk map and mapping the extent of loblolly pine decline across the southeastern United States.

A. Singh 2010 - 2012

Thesis: Resistance of *Pinus taeda* families against *Leptographium* root fungi and assessment of family morphological traits linked to *Leptographium* infections.

Y. Zeng 2009 – 2012

Thesis: Bark beetle populations related to Silviculture disturbances.

J. Thompson 2007 - 2011

Thesis: Forest health evaluations of stand health in association with biomass removal.

R. Menard 2004 - 2007 (co-advisor) (Louisiana State University)

Thesis: An assessment of loblolly pine decline risk mapping system for the use of managing loblolly pine decline sites within Red_Cockaded Woodpecker (RCW) habitat.

External Advisor/Reader

Z. Barwary 2014 (Auburn University, Auburn, AL) K. Collins 2004 (Southern University, Baton Rouge, LA)

External International Examiner

C. Rodas 2013 (University of Pretoria, Pretoria, South Africa)

Visiting Scientist

Dr. Rosine Hall, 2015, 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

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 Frank Anderson, 2004-2005, Louisiana State University, LA

Undergraduate Student Researchers

Jordan Health, 2015, Auburn University, AL Wilson Strickland, 2015, Auburn University, AL Chase Seals, 2015, Auburn University, AL Cody Hartzog, 2014-2015, Auburn University, AL Caleb Killough, 2014-2015, Auburn University, AL Cora Yates, 2014, Auburn University, AL Ashton Newman, 2013-2014 Dustin Morgan, 2013, Auburn University, AL Matthew Fennema, 2013 – 2014, Auburn University, AL Trent Williamson, 2013-2014, Auburn University, AL Fern Graves, 2013-2014, Auburn University, AL Seth Hunt, 2013-2014, Auburn University, AL Kathryn Fuller, 2013, Auburn University, AL Martha Priester, 2012-2013, Auburn University, AL Andrew Henderson, 2011, Auburn University, AL Cedric Frazer, 2010-1011, 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
Frank Anderson, B.S. 2005, Louisiana State University, LA
Kelly Thornton, B.S. 2004, Louisiana State University, LA
Christian Danna, B.S. 2004, Louisiana State University, LA

Undergraduate Student Summer Research Interns

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.
A.A., Merchandise Marketing, Fashion Institute of Design & Merchandising, Los Angeles, CA, 1988. Graduated with honors.

WORKSHOPS AND TRAINING ATTENDED:

- -AUSOM Scholarship Committee Chair Training, Auburn University, AL, February 17, 2015
- -Communicating with Tact, Diplomacy and Professionalism, Atlanta, GA, February 5-6, 2015
- -Degree Works Training, Auburn University, AL, July 8, 2014
- -Leadership in Academia: Challenges and Opportunities, Auburn University, AL, April 29, 2014
- -Building Your Career Portfolio, Auburn University, AL, April 29, 2014
- -AUSOM Reviewer Training, Auburn University, AL, February 17, 2014
- -Introduction to Highly Hazardous Chemicals Training and Introduction to Water Reactive Chemicals Training, Auburn University, AL, December 2013.
- -Advising for Academic and Career Success (AD100), Auburn University, AL, August 1, 2013
- -New Faculty Orientation, Auburn University, AL, August 13-14, 2012
- -Meeting Skills (MG510), Auburn University, AL, March 8, 2012
- -Access 2010 Intermediate (PC921), Auburn University, AL, March 6-7, 2012
- -Budget Balances for Faculty and Directors (CT270), Auburn University, AL, February 2, 2012
- -Responding to Student Writing, Office of University Writing, Auburn University, November 18, 2011
- -Using revision in courses, Office of University Writing, Auburn University, October 28, 2011

- -Beyond the Grad Student Teaching Undergraduates through Research, Webinar, Principle Investigators Association, August 31, 2011.
- -Conflict Management Skills for Women, Columbus, GA, July 20, 2011.
- -Introduction to Performance Management: A Supervisor's Guide (PM100), Auburn University, AL, June 2, 2011.
- -Principles of Performance Management: Planning, Measurement, Feedback, Evaluation (PM110), Auburn University, AL, February 15, 2011.
- -Genetic Data Analysis in Tree Breeding Workshop, North Carolina State University, May 16-20, 2011.
- -Motivating Your Lab Team! Webinar through Principal Investigators Association, September 23, 2010.
- -Laboratory Safety (SA200), Biosafety Cabinet Safety, Hazardous Material Safety, Auburn University, AL, September 15, 2010.
- -How to be a Supervisor (MG401), Auburn University, AL, August 24, 2010.
- -COACh Workshop for Women Faculty in STEM Disciplines, Auburn University, March 29, 2010.
- -Laboratory Safety, Biosafety Cabinet Safety, Hazardous Material Safety, Auburn University, AL, October 9, 2009.
- Mini-Sabbatical at Forestry and Agriculture Biotechnology Institute working with Dr. Michael Wingfield, University of Pretoria, South Africa, May 2-June 14, 2009.
- -Advanced Fungal Phylogenetic Analysis, University of Pretoria, FABI, South Africa, May 25-29, 2009.
- -Introductory Fungal Phylogenetic Analysis, University of Pretoria, FABI, South Africa, May 20-22, 2009.
- -Introduction to Access 2007 (PC920), Auburn University, Auburn, Alabama, February 20, 24, 2009.
- -Managing Multiple Projects, Objectives and Deadlines, Atlanta, GA, November 4, 2008.
- -GC-MSD ChemStation and Instrument Operation. Agilent Technologies, Alpharetta, GA, May 5-9, 2008.
- -CSREES Integrated Competitive Programs Grantsmanship Workshop, Memphis, TN, March 10-11, 2008.
- Bark and Ambrosia Beetle Identification Workshop, North Central Plant Diagnostic Network, Michigan State University, East Lansing, MI, March 3-6, 2008.
- -Forest Decline in the Southern United States: Assessment of the State of the Science, Atlanta, GA, June 5-6, 2007.
- -1st International Sirex Symposium, University of Pretoria, South Africa, May 9-16, 2007.
- -Longleaf Pine Mapping and Decision Support Tool Development Workshop, Auburn, AL, Apr 10, 2007.
- -FIA Data Training, Athens, GA March 1, 2007.
- -Chainsaw Certification, Auburn, AL June 12-13, 2006.
- -Histological Preparations of Plant Tissue, Auburn, AL May 18-19, 2006.
- -Forest Health Monitoring Certification Training, Pineville, LA, 2000, 2003-2013.
- -USDA Forest Service Workshop on Longleaf Pine Decline following Fire, Athens, GA, October 31-November 1, 2000.

RESEARCH 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)

- Beach, J., Uertz, J., and Eckhardt, L. **2015**. Hyperspectral interferometry: sizing micro-scale surface features in the pine bark beetle. Microscopy Research and Techniques 00: 000-000 *in press*.
- *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. Contribution = 10%
- *Martin, S., 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.
- *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.
- 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.
- 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.
- *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 p*lantations 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: 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. **2010.** Loblolly pine decline (sidebar). In: Managing forests on private lands in Alabama and the southeast, Chapter 12. McNabb, K. and Gjerstad, D., eds.

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

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. Contribution = 25%

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

Menard, R., Eckhardt, L., and Hess, N. (*In press*). Root pathogen assessment of pest trend-impact system (PTIPS) established to monitor pine decline within the western zone of the southern region. Report No. 2009-00-00. Pineville, LA: U.S. Department of Agriculture, Forest Service, Forest Health Protection.

Beach, J., Uertz, J., and Eckhardt, L. **2015**. Hyperspectral interferometry: sizing micro-scale surface features in the pine bark beetle. Research Report 2015-06. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University. Contribution = 30%

*Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of simulated rainfall treatments on loblolly pine seedlings inoculated with ophiostomatoid fungi. Research Report 2015-05. Forest

- Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University. Contribution = 10%
- *Chieppa, J.J., Chappelka, A.H., and Eckhardt, L.G. **2015**. Effects of elevated tropospheric ozone on loblolly pine seedlings inoculated with ophiostomatoid fungi. Research Report 2015-04. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University. Contribution = 10%
- Brunson, B. and Eckhardt, L.G. **2015**. Assessing tree vigor impact of *Imperata Cylindrica* to *Pinus taeda* in southeastern Mississippi. Research Report 2015-03. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- Brunson, B. and Eckhardt, L.G. **2015**. Assessing soil dynamics associated with *Imperata Cylindrica* in its relation to loblolly pine decline. Research Report 2015-02. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- Brunson, B. and Eckhardt, L.G. **2015**. Impact of cogongrass (*Imperata cylindrica*) on populations of root-feeding bark beetle species associated with loblolly pine decline. Research Report 2015-01. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Singh, A. and Eckhardt, L.G. **2014**. Variation in root lesions in loblolly pine (*Pinus taede* L.) families against *Leptographium* and *Grosmannia* root infecting fungi. Research Report 2014-08. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Singh, A. and Eckhardt, L.G. **2014**. Variation in resistance of loblolly pine (*Pinus Taeda* L.) and slash pine (*P. elliotii* Englem.) families against *Leptographium* and *Grosmannia* root fungi: year two results. Research Report 2014-07. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Singh, A. and Eckhardt, L.G. **2014**. Variation in resistance of loblolly pine (*Pinus Taeda* L.) and slash pine (*P. elliotii* Englem.) families against *Leptographium* and *Grosmannia* root fungi: year one results. Research Report 2014-06. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Matusick, G. and Eckhardt, L.G. **2014**. The pathogenicity and virulence of four ophiostomatoid fungi on young longleaf pine trees. Research Report 2014-04. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Matusick, G. and Eckhardt, L.G. **2014**. Virulence of *Leptographium serpens* on longleaf pine seedlings under varying soil moisture regimes. Research Report 2014-03. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Matusick, G. and Eckhardt, L.G. **2014**. Variation in virulence among four root-inhabiting ophiostomatoid fungi on *Pinus taeda* L., *P. palustris* Mill., and *P. elliottii* Engelm. seedlings. Research Report 2014-02. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Zeng, Y. and Eckhardt, L.G. **2014**. Factors associated with incidence of ophiostomatoid fungal species contributing to southern pine decline. Research Report 2014-01. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- Chappelka, A.H., Eckhardt, L.G., and Chieppa, J. 2014. Interactions of future climate change scenarios

- of elevated tropospheric ozone with loblolly pine decline. Preceedings of the Western Forest Pathology Workshop.
- *Zeng, Y. and Eckhardt, L.G. **2013**. Thinning and harvesting effects on root-feeding bark beetle populations dynamics in *Pinus taeda* L. plantations in central Alabama and Georgia. Research Report 2013-05. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Meyerpeter, B.M. and Eckhardt, L.G. **2013**. Hazard and risk mapping of loblolly pine (*Pinus taeda* L.) decline in the southeastern United States. Research Report 2013-04. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Thompson, J.A. and Eckhardt, L.G. **2013**. Pretreatment invasive plant survey at the Oakmulgee Ranger District, Talladega National Forest, Alabama. Research Report 2013-03. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Thompson, J.A. and Eckhardt, L.G. **2013**. Efficacy of three insect trap types at the Oakmulgee Ranger District, Talladega National Forest, Alabama. Research Report 2013-02. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Thompson, J.A. and Eckhardt, L.G. **2013**. Bark and ambrosia beetle diversity at the Oakmulgee Ranger District, Talladega National Forest, Alabama. Research Report 2013-01. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- 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 13th International Conference of the IUFRO Working Party 7.02.01, September 4-10, 2011 Firenza Italy on Root and Butt Rot of Forest Trees, Capretti, P., Comparini, C., Garelotto, M., La Porta, M. (eds), University Press, Firenze.
- *Singh, A., Booker, R., Anderson, D., and Eckhardt, L. **2011**. Effects of nitrogen on resistance of *Pinus taeda* families against *Leptographium* root fungi. Research Report 2011-03. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Singh, A., Booker, R., Anderson, D., and Eckhardt, L. **2011**. Resistance of *Pinus taeda* families against *Leptographium* root fungi and assessment of family morphological traits linked to *Leptographium* infections. Research Report 2011-02. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- *Zeng, Y., Booker, R., and Eckhardt, L. **2011**. Association between bark beetle population dynamics and silviculture disturbances in decline-impacted loblolly pine stands: year one data. Forest Health Cooperative Research Report 2011-01. Forest Health Cooperative, School of Forestry and Wildlife Sciences, Auburn University.
- 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.
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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.

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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.

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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., 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. 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.

PAPERS OR LECTURES:

Invited International Presentations / Lectures / Seminars

- 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 6th 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. 32nd New Phytologist Symposium on Plant interactions with other orgaisms: 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. caribeae* 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 mortalitiy in natural stands of *Pinus oocarpa* and *Pinus caribaea* in Nicaragua. Annual Meeting of the UNA Department of Protection of Agriculture and Forests, Instituto National 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 National 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 National 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

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. **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. Southwide 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 Alambama. 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. 2nd 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, Jekyl 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)
- 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, Maryland.
- *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, Maryland.

- *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, Maryland.
- 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, Georgia
- 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, Georgia
- *Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invated commercial *Pinus taeda* stands. Joint Auburn University Southern Forest Nursery Management & Forest Health Cooperatives 2015 Contact Meeting. St, Simons, Georgia
- *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, Georgia
- *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, Georgia
- *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, Georgia
- 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, North Carolina
- 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, North Carolina
- *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, Alabama.
- *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, Alabama.
- *Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invated commercial *Pinus taeda* stands. This is Research: Student Symposium 2015. Auburn University, Auburn, Alabama.

- *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, Alabama.
- *Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invated commercial *Pinus taeda* stands. Southeastern Ecology and Evolution Conference, Athens, Georgia.
- *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. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- 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? 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- 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. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *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. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *Trautwig, A., Eckhardt, L., Hoeksema, J., and Carter, E. **2015**. Mycorrhizal communities in *Imperata cylindrical* invaded and non-invated commercial *Pinus taeda* stands. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- 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. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- 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, Utah.
- *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, Utah.
- *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, Utah.
- *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, Utah.
- *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 infared 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^{nd} New Phytologist Symposium on Plant interactions with other orgaisms: 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 congongrass, 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 affects 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.
- 8Singh, 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 Africian Society of Plant Pathology 47th 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.
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- 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 58th 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, RD., 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 *Grosmannia 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. 86th 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., 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, Alabama.

*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, Alabama

*Devkota, P., Singh, A., Nadel, R. and Eckhardt, L 2015. Variance and tolerance of several loblolly pin

- (*Pinus taeda*) families to *Leptographium terebrantis* and *Grosmannia huntii* root fungi. SFWS Annual Advisory Meeting Student Poster Session, Auburn University, Auburn, Alabama
- *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, Alabama
- *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, Alabama
- *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, Alabama
- 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? 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *Cole, A. and Eckhardt, L., Liebold, A., and Slippers, B. **2015**. A survey for *Sirex noctilio* and native woodwasps in Alabama. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *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, Georgia
- *Devkota, P., Singh, A., Nadel, R. and Eckhardt, L **2015**. Variance and tolerance of several loblolly pin (*Pinus taeda*) families to *Leptographium terebrantis* and *Grosmannia huntii* root fungi. Southeastern Society of American Foresters Annual Meeting, St Simons Island, Georgia
- *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, Georgia
- *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, Georgia
- *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, Alabama.
- *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, Alabama
- *Devkota, P., Singh, A., Nadel, R. and Eckhardt, L **2015**. Variance and tolerance of several loblolly pin (*Pinus taeda*) families to *Leptographium terebrantis* and *Grosmannia huntii* root fungi. SFWS Annual

- Advisory Meeting Student Poster Session, Auburn University, Auburn, Alabama
- *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, Alabama
- *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, Alabama
- *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, Alabama
- 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? 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *Devkota, P. and Eckhardt, L. **2015**. Variance and tolerance of several loblolly pine (*Pinus taeda*) families to *Leptographium terebranctis* and *Grosmannia huntii* root fungi. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *Cole, A. and Eckhardt, L., Liebold, A., and Slippers, B. **2015**. Prevalence of *Sirex noctilio* F. in the southeastern United States. 18th Annual Biennial Southern Silvicultural Research Conference, Knoxville, Tennessee.
- *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, Utah.
- *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, Utah.
- Eckhardt, L.G., Singh, A., 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, Utah.
- Eckhardt, L.G., Zanzot, J.W., Anderson, D.D., and Bauman, T.A. **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, Utah.
- *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 populatins associated with southern pine decline. XXIV IUFRO World Congress on "Sustaining Forests, Sustaining People: The

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- 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
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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 10th International Conference, Quebec, Canada

Bauman T.A., Eckhardt, L.G., Goyer, R.A., and Klepzig, K.D. **2001**. 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

GRANTS/AWARDS RECEIVED:

\$33,000	2014	Participation Agreement with US Forest Service, Forest Health Monitoring, Project: Sudden oak death (<i>Phytophthora</i>
		ramorum) detection
\$49,980	2015	AU-IGP: Novel analytical tools for the selection of superior
		loblolly pine genotypes for improved plant health, fuels, and chemicals (Co-PI)
\$315,765	2015	Forest Health Cooperative, SFWS, Auburn University, AL
		Quantifying the impact of pine decline in the southeastern
		United Staes.
\$122,180	2015	Forest Health Cooperative, SFWS, Auburn University, AL
		Projects determined by members
\$36,000	2014	Participation Agreement with US Forest Service, Forest Health
		Monitoring, Project: Sudden oak death (Phytophthora
		ramorum) detection
\$122,180	2014	Forest Health Cooperative, SFWS, Auburn University, AL
		Projects determined by members
\$300,000	2014	NSF: Seedling production and forest health in the Southeastern
		United States. (Co-PI)
\$50,000	2014	DoD: Identification of climate effects on microbial symbionts of
		longleaf pine. (Co-PI)
\$52,000	2013	DoD: Identification of climate effects on microbial symbionts of
		longleaf pine. (Co-PI)
\$40,000	2013	HATCH: Rapid assessment tools for the genetic
		improvement of forest products and bioenergy. (Co-PI)
\$207,000	2013	United States Forest Service, Forest Health Monitoring Project:
,,		Testing a rapid PCR screening test for the presence of <i>Fusarium</i>
		circinatum, the causal agent of pitch canker on pine planting
		material. (Co-PI)
\$36,000	2013	Participation Agreement with US Forest Service, Forest Health
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\$179,960	2005-2006	Participating Agreement with US Forest Service, Forest Health Protection, Project: Longleaf pine assessment and evaluation of sustainable longleaf pine stands for RCW colony and foraging habitat. In cooperation with US Army, Fort Benning, GA
\$100,800	2004-2006	Participating Agreement with US Forest Service, Forest Health Protection, (PTIPS & FHM), Project: Validation of risk mapping for loblolly decline across the southeastern US.
\$2,500	2005	Cooperative Agreement with LSU. Project: Testing wood decay fungi.
\$265,000	2003-05	Participating Agreement with US Forest Service, Forest Health Protection, Project: Risk mapping, loblolly decline and sustainable RCW habitat. In cooperation with US Army, Fort Benning, GA
\$200	2003	C. W. Edgerton Honor Award, Outstanding Performance as a Graduate Student, Department of Plant Pathology & Crop Physiology, Louisiana State University
\$100	2003	Outstanding Student Research Paper Award, South-wide Forest Disease Workshop
\$50	2002	Outstanding Student Research Paper Award, Louisiana State University, Graduate Student Association Annual Intellectual Gumbo Poster Symposium
\$100	2002	Outstanding Student Research Paper Award, South-wide Forest Disease Workshop
\$100	2001	Outstanding Student Research Paper Award, Louisiana State University, Graduate Student Association Annual Intellectual Gumbo Poster Symposium
\$3,800	1996	Howard Hughes Medical Institute Undergraduate Research Fellowship (plus research budget)

OTHER RESEARCH CONTRIBUTIONS:

U.S. Provisional Patents

- 2011 Title: "*TIMBER DOGS CONOPS*" Auburn University, Disclosure #2011-042. Inventors: Terrence D. Fischer, Lori G. Eckhardt, & Jason W. Dewitt.
- 2008 Title "RAPID PCR SCREENING TEST FOR THE PRESENCE OF FUSARIUM CIRCINATUM" Auburn University Technology Disclosure #08-062. Inventors: Scott Enebak & Lori Eckhardt.

Regional Programs

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

2009-Present 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
- Collaboration with Drs. Wilhelm de Beer and Mike Wingfield, Forestry and Agriculture Biotechnology Institute (FABI) to describe several new species of *Ophiostoma* 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.
- Collaboration with Dr. Bernard Slippers (Director Biocontrol Programme, Forestry and Agriculture Biotechnology Institute (FABI), South Africa) to look at Sirex populations in Alabama and what their relationship is with declining pine across the State. To identify if *Sirex noctillo* is present in Alabama along with its fungal symbionts and nematodes. FABI will provide training for a MS student in Sirex identification, dissection for nematodes, culturing fungus and nematodes November 2014. FABI will provide training, facilities, room and board for MS 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 *Eucalyptus* and *Pinus* 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.

2009-2014

Collaboration with Dr. Michael Wingfield, Dr. Brenda Wingfield and Wilhelm de Beer to elucidate the taxonomy and population genetics of *Leptographium huntii* (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 *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.

2009-2013

Collaboration with Dr. Michael Wingfield, Dr. Brenda Wingfield and Wilhelm de Beer to elucidate the population genetics of *Leptographium serpens* (possible exotic) an insect-vectored root-infecting bluestain fungis 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.

2009-2013

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 National Agrarica (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 worldwide 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:

2012 to Present	Member of International Society of Plant Pathology
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	Editorial Board, Fine Focus, An International Microbiology Journal for
	Undergraduate Research
2015	Sigma Xi Membership Reviewer (Reviews nomination packets for new
	initiate's for membership at the National level)
2015	Judge for Sigma Xi Student Research Showcase
2014-2015	Assistant Professor CV and Promotion and Tenure Packet Reviewer for
	Pathways to Full Professor and Beyond a Women's Initiative program,
	Auburn University
2013	Judge for Spirit of Innovation Challenge (The program invites teams of
	high school students to use their science andengineering skills to create
	innovative products and services that benefit humanity.)
2013	Committee Member, SFWS Wildlife Faculty Search Committee
2013	Committee Member, Department of Entomology and Plant Pathology
	Mycology Faculty Search Committee

2013	Panel Member, Hatch Equipment Grant
2012-2013	Judge for Undergraduate and Graduate Research for Research Week,
	Auburn, AL
2012	Served as Faculty Representative for SFWS at Spring, Summer and Fall
	Graduation
2012	Committee Member, SFWS Contracts and Grants Coordinator Search
	Committee
2011	Committee Member, SFWS Executive Budget Coordinator Search
	Committee
2010	Committee Member, SFWS Dean Search Committee
2010	Listed in Marquis Who's Who in Science and Engineering 11 th Edition
2010	Member, Alabama SOD Task Force
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
2007	Mentor – Job Shadow Program, Junior Achievement of East Alabama-
	West Georgia and the Alabama Cooperative Extension System,
	Auburn, AL
2007-2013	Judge for the Undergraduate Research Forum, Auburn AL
2006-2014	Assisted with the 4H Forestry State and National Competition
2006-2012	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

HONORS AND AWARDS:

- 2011 Outstanding Extension Paper Award, South-wide Forest Disease Workshop, Quincy, FL
- 2011 Outstanding Pathology Research Paper Award, South-wide Forest Disease Workshop, Quincy, FL
- 2007 Appreciation Award, Appreciation for Participation in the Job Shadow Program, Junior Achievement and Alabama Cooperative Extension System, Auburn, AL
- 2005 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, 4th Southern Forestry and Natural Resources GIS Conference, Athens, GA
- 2004 Distinguished Dissertation Finalist, College of Agriculture, Louisiana State University, Baton Rouge, LA
- 2003 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
- 2002 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
- 2001 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
- 1996 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
- 1995 *Alpha Chi Sigma*, National Co-ed Chemistry Fraternity, University of Maryland, College Park, MD
- 1993 Golden Key National Honor Society, Wayne State University, Detroit, MI
- Society of Distinguished American High School Students, Marshall Academy, Holly Springs, MS

Honors and Awards of Graduate Students I Direct

- 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 1st 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 1st Place Student Poster Award, SE Society of American Foresters, St. Simons Island, GA (\$100)
- 2015 Pratima Devkota 2nd 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 1st Place Student Poster Award, 68th Forest Products Convention, Quebec City, Canada
- 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 1st 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 2nd Place Student Poster Award, IGERT: Workshop on Energy, Transportation, and Water Infrastructure: Policy and Social Perspectives, Ames IA
- 2013 Ben Brunson 1st Place Student Poster Award, SE Society of American Foresters, Mobile AL (\$100)
- 2013 Amritpal Singh 2nd 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 1st Place Student Poster Award, SE Society of American Foresters, Jekyll Island GA (\$100)
- 2012 Amritpal Singh 2nd 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 2nd Place Student Poster Award, Southeastern Society of American Foresters, Calloway Gardens, GA
- 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)

James Zanzot - Westervelt Fellowship, School of Forestry and Wildlife Sciences, Auburn University (\$2,400 per year for 3 years)