

JEFFREY J. SLAHOR — 2015

EDUCATION

1999: M.S., Wood Industries, West Virginia University, Morgantown, WV
1987: B.S. Forestry, Wood Products Utilization, University of Maine,
Orono, ME.

EMPLOYMENT

Aug., 1991 - Present - Research Instructor/Wood Technologist, Appalachian Hardwood Center, West Virginia University, Morgantown, WV. Responsibilities include developing proposals for research projects, implementing experimental methods, writing reports, ensuring deliverables are submitted to sponsoring agencies on time and within budget. Research projects require both critical and creative thinking, combining appropriate personnel and materials required to bring projects to successful completion.

June, 1988 - Dec., 1990 - Research Assistant, Wood Science, University of Maine, Orono, ME. Responsibilities included oversight of day-to-day operations of research projects, writing technical progress reports, updates, and aiding in preparation of articles for peer review submission. Research topics included remedial treatments for utility poles with fumigant and diffusible chemicals; methods of improving preservative penetration and retention in *Picea* spp (spruce) with preservative CCA; decay resistance testing and various mechanical property/strength testing procedures.

Sept., 1983 - Dec., 1987 - Research Assistant, University of Maine, Orono, ME. Assisted with acid deposition projects and joint forestry/wildlife research projects.
Summers 1983 – 1987 - Research Assistant with International Paper Co., Maine Bureau of Public Lands, and the Holt Research Forest.

ASSOCIATIONS

Xi Sigma Pi National Forestry Honor Fraternity (5/3/86).
Phi Kappa Phi (4/14/87).
International Forestry Quarantine Research Group
Society of Wood Science and Technology
American Wood Protection Association

RESEARCH

Current Projects

- Innovation in Cross Laminated Timbers from Low-Value Hardwoods. Hardwood Research Trust Fund Project
- Wide plank flooring investigation. AHC Project
- Hybrid poplar biomass. AHC Project
- Silt Soxx Erosion Control. AHC Project
- Hardwood Fuel Pellet Production. WDSC Project
- Cooperative Effort with NETL Investigating ACQ Distribution in Southern Pine Wood Using X-Ray Tomography

Completed Projects

- Evaluating the Effectiveness of 1-Step Preservatives in Wood Posts against Termite Attack. \$134,537 Stella Jones
- Analysis of boron content in wood cores from railway ties treated with a proprietary creosote/boron solution. \$34,888 Stella Jones—no cost extension to July 31, 2012.
- Contract Wood Preservative Research, established a nondisclosure agreement with Encore Rail with some initial work seeking an alternative for creosote.
- Use of non-destructive spectroscopy methods for identifying wood species “in-line” during lumber sawing and manufacture of various wood products; USDA Wood Education and Resource Center (WERC); \$40,000—Rapid Identification and Segregation of Railroad Hardwood Ties by Species Using a Non-Destructive Method
- Investigation of non-destructive techniques for determining decay/defect in standing timber; USDA Forest Service; \$35,000.
- Sanitation of wood packaging material for international trade via heat treatment of wood material using hot water bath as opposed to commonly used hot air systems; WERC; \$35,000.
- Preservative treatment evaluation of several Appalachian wood species in relation to treatability and durability; USDA FS Forest Products Laboratory; \$300,000.

Refereed Publications

Nkansah, K., Emmanuel Atta-Obeng, Emmanuel O. Adedipe, Benjamin Dawson-Andoh **Jeffrey Slahor**, Lawrence Osborn. Determination of concentration of ACQ wood preservative components by UV-Visible spectroscopy coupled with multivariate data analysis ***Chemometrics and Intelligent Laboratory Systems* 147 (2015) 157-166.**

Hassler C. C., S. Grushecky, J. **Slahor**, and P. Turk. An Assessment of the Impacts of a Domestic Treatment Regulation for Wood Packaging Material Manufacturers. 2010. *Forest Products Journal* 60(4): 309-314.

Nkansah, Kofi, Benjamin Dawson-Andoh and Jeffrey **Slahor**. Rapid characterization of biomass using near infrared spectroscopy coupled with multivariate data analysis: Part 1. Yellow-poplar (*Liriodendron tulipifera* L.)" on line in *Bioresource Technology* 101 (2010) 4570-4576.

Adedipe, O.C., B. Dawson-Andoh, J. **Slahor**, and L. Osborn. Classification of Red Oak (*Quercus rubra*) and White Oak (*Quercus alba*) using a NIR Spectrometer and Soft Independent Modeling of Class Analogies. *Journal of Near Infrared Spectroscopy*. 2008. Vol. 16: 49-57.

Slahor, J.J., L.E. Osborn, E.T. Cesa, B. Dawson-Andoh, E. Lang, and S. Grushecky. Using a Hot Water Bath as an Alternative Phytosanitation Method for Wood Packaging Material. 2005. *Forest Products Journal* 55(4): 59-61.

Dawson-Andoh, B. E., J.J. **Slahor**, L. Osborn, and L. McDonald. 2002. Effect of Pre-Extraction by Different Solvent Systems on Leaching of CCA Components from Treated Appalachian Hardwoods. *Forest Products Journal* 52(10): 62-66.

Slahor, J.J., C.C. Hassler, and B. Dawson-Andoh. 2001. The Durability of Yellow-Poplar and American Beech Treated With Chromated Copper Arsenate. *Forest Products Journal* 51(4): 62-66.

Slahor, J.J., H. M. Barnes , B. Dawson-Andoh, T. L. Amburgey, and C.C. Hassler. 2001. The Durability of Yellow-Poplar and American Beech Treated With Creosote and Borate. *Forest Products Journal* 51(7/8): 51-55.

Hassler C.C., **Slahor**, J.J., R.C. DeGroot, and D.J. Gardner. 1999. A Comparison of the Treatability of Southern Yellow Pine to Five Appalachian Hardwoods. *Forest Products Journal* 49(2): 89-93.

Slahor, J.J., C.C. Hassler, R.C. De Groot, and D.J. Gardner. 1998. Treatability of Five Appalachian Wood Species with Creosote and Timbor®. *American Wood Preservers Association Proceedings, Ninety-Fourth Annual Meeting.*

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Refereed Publications (cont.)

Hassler C.C., **Slahor**, J.J., R.C. DeGroot, and D.J. Gardner. 1998. Preservative Treatment Evaluation of Five Appalachian Hardwoods at Two Moisture Contents. *Forest Products Journal* 48(7/8): 37-42.

Slahor, J.J., C.C. Hassler, R.C. DeGroot, and D.J. Gardner. 1997. Preservative Treatment Evaluation with CCA and ACQ-B of Four Appalachian Wood Species for Use in Timber Transportation Structures. *Forest Products Journal* 47(9): 33-42.

Slahor, J.J., C.C. Hassler, R.C. DeGroot, and D.J. Gardner. 1997. Preservative Treatment Evaluation of Red Maple and Yellow-Poplar with ACQ-B. *Forest Products Journal* 47(4): 50-54.

Goodell, B., J. Liu, and J. **Slahor** 1995. Evaluation of Diffusible Preservatives Using an Accelerated Field Simulator. *Forest Products Journal* 45(6): 74-76.

Technology Transfer

Naturally Durable Wood, Appalachian Hardwood Center Fact Sheet 2007, 4pp.

Design and Feasibility Analysis for a Hot Water Bath Facility That Sanitizes Wood Packaging Material. 2004. 15 pp.

Case Studies on Wood Biomass Use in the Northeastern United States. 2004. 31 pp.

Preventing Wood Deterioration. Appalachian Hardwood Center Fact Sheet Vol. 04-2. 2 pp.

Wood Preservatives. Appalachian Hardwood Center Fact Sheet Vol. 04-3. 2pp.

A Survey of the Wood Treating Industry of West Virginia: 1991 versus 1997. **Slahor**, J.J., C.C. Hassler. 1999. *Crossties* 80(6): 24-25.

Leaching of Copper, Chromium, and Arsenic from CCA Treated Hardwood Lumber. Gardner, D.J. and J. **Slahor**. National Research Center for Coal and Energy, 1995. OSP#68-211/WRI103.

Wood Preservation-Timber Bridges. **Slahor**, J.J., Herman C. Sims, and Curt C. Hassler. Submitted to U.S. Forest Service-Timber Bridge Initiative Program. January 1995 10pp

Fixation of Chromated Copper Arsenate (CCA) in Selected Appalachian Hardwoods. Gardner, D.J. and J.J. **Slahor**. In "Opportunities For The Hardwood Industry To Address

Environmental Challenges. Proceedings of the Twenty-Second Annual Hardwood Symposium." 1994. 91-100.

Preservative Treatment Evaluation of American Beech and Yellow-Poplar. **Slahor**, J.J., C.C. Hassler, and D.J. Gardner. Final Report submitted to: West Virginia Division of Forestry. January 1994. 48 pp.

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Technology Transfer (cont.)

Wood Preservation in West Virginia. **Slahor**, J.J. and C.C. Hassler. Fact Sheet #9 Appalachian Hardwood Center. 1992. 8 pp.

Efficient Utilization for Timber Bridges. Pahl, T.P., C.C. Hassler, and J. **Slahor**. Final Report Submitted to: USFS Forest Products Laboratory. April 1992. 78 pp.

Non-refereed Publications

The Future of Wood Preservation. **Jeffrey J Slahor**, 2014 Appalachian Hardwood Info Sheet 4pp.

Softwood Species as Fencing Material. **Jeffrey J Slahor**, Lawrence Osborn. **2013** Appalachian Hardwood Info Sheet 7pp.

Employment in the West Virginia Wood Products Manufacturing Sector 2002 – 2012 October 2012 AHC Fact Sheet 2pp.

Woodsense:Acclimating Wood: Discover the secrets for long lasting projects— Wood Craft Magazine Feb/Mar 2009

Woodsense:Red Oak— Wood Craft Magazine Apr/May 2009

Service

American Wood Protection Association – 2014-Present, Vice-chair Technical Committee T—3 Piles and Ties, voting member T—1 General Administration

Society of Wood Science and Technology manuscript review -- “Comparative Evaluation of Natural Durability Qualities of Branch and Stem Woods of *Entandrophragma cylindricum* (sapele) for ground application.”

American Wood Protection Association – Vice Chair T3 (Treatments) Committee, Ties and Poles. Member Education Task Force for Proper Treated Wood Application.

Proctor/Instructor Pesticide Applicator Re-certification Classes/Wood Preservation — Certified by WV Department of Agriculture

October 2010 Railway Tie Association Symposium and Technical Conference. Presentation “An Operational Enhancement from Two Step Borate to One Step Borate for Treated Wood”

2009 Railway Tie Symposium and Technical Conference

July 25, 2007 -- “Removal of Metal Ions from Acid Mine Drainage Using Lignocellulosic Material” to the 2007 workshop of The Center for Advanced Separation Technologies (CAST) at Virginia Tech.

1998 — Research Paper -- Treatability of Five Appalachian Wood Species with Creosote and Timbor to the American Wood Preservers Association, Ninety-Fourth Annual Meeting, Scottsdale, AZ.

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Service (cont.)

1996 — Research Paper -- Preservative Treatment Evaluation of Red Maple and Yellow-Poplar with ACQ-B to the first national meeting on the Timber Bridge Initiative, Madison WI.

1994 — Research Paper -- Fixation of Chromated Copper Arsenate (CCA) in Selected Appalachian Hardwoods to the Twenty-Second Annual Hardwood Symposium, Richmond, VA.

1993 — Slide show to Burke-Parsons Bowlby Corporation on “The Status of Wood Preservation Research at WVU.”

1991–1994 -- Assisted in the yearly preparation of Sara Title III Toxic Release Inventory (TRI) Form R “Right to Know” reports to the EPA for Burke-Parsons Bowlby wood preservative treatment plants in Spencer, WV, Goshen, VA, Dubois, PA, and Stanton, KY.

Teaching

Wood and the Environment—a web based course presenting the fundamentals needed for an understanding of wood from a material science perspective as well as touching on woods’ inherent sustainability and “greenness”. Taught summer and fall semesters 2014, spring and fall semesters 2015. Will be submitted as GEF course spring ’16. In process of being adapted as WVU MOOC, titled ‘Wood: Beyond Building’, offering in 2016.

Pesticide Applicator Recertification Class Wood Preservation—presented to WVFA annual meeting July 2015 and Coastal Lumber Co./Appalachian Timber Services, Sutton, WV November 2015.

WDSC 480, Capstone Project I – Seminar -- Life Cycle Analysis of Wood, Plastic, and Concrete Railway Ties – Fall 2014; Mentor student senior project Fall 2015.

Pesticide Applicator Recertification Class Wood Preservation—presented to Appalachian Timber Services, Sutton, WV – December 2014

WDSC 494 Fall 2013 Seminar – Non-chemical preservative techniques for wood preservation

Co-instructor WDSC 351 Forest Products Protection – Wood Preservation alternate years (2014) (20%), 3 credits.

Pesticide Applicator Recertification Class-Wood Preservation, Dec 2012 Sutton WV

Pesticide Applicator Recertification Class-Wood Preservation s, July 2012 West Virginia Forestry Association Annual Meeting Canaan Valley Resort

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Teaching (cont.)

Pesticide Applicator Recertification Class-Wood Preservation, July 2011 West Virginia Forestry Association Annual Meeting

Pesticide Applicator Recertification Class-Wood Preservation, Dec 2011 Sutton WV

Pesticide Applicator Recertification Class-Wood Preservation, Dec 2010, 7 participants, Sole Instructor (100%)

Pesticide Applicator Recertification Class-Wood Preservation, Nov 2009, 7 participants, Sole Instructor (100%)

November 6, 2008 -- Pesticide re-certification class-Wood Preservation presented in Sutton, WV for licensed pesticide applicators and technicians.

November 7, 2007 -- Pesticide re-certification class-Wood Preservation presented in Sutton, WV for licensed pesticide applicators and technicians.

Spring Semester 2007 – Laboratory sections of WDSC 351 *Forest Products Protection*, involving preservative treatment and evaluation of wood.

1993/1997/2006 -- Pesticide re-certification classes-Wood Preservation taught at West Virginia Forestry Association (WVFA) annual meeting, Canaan Valley, WV.