

53rd Southern Forest Insect Work Conference

July 20-23, 2010

Wilmington Riverside Hilton, Wilmington, NC

Bud Mayfield, SFIWC Chair

John Nowak, Local Arrangements

Will Shepherd, Secretary-Treasurer

Kier Klepzig and Fred Stephen, Program Chairs



**53rd Southern Forest Insect Work Conference,
July 20-23, 2010
Wilmington Riverside Hilton, Wilmington, NC**

PROGRAM

Tuesday, July 20th

- | | |
|-------------|---|
| 1:00-2:30PM | SPB Working Group (Carolina)
SPB State of the Union. Stephen Clarke
Updates on the Data Portal. Tony Courter
SPB prevention and data portal. John Nowak
SPB survey data on the portal. Tony Courter and Judy Adams
SPB II: It's a wrap. Kier Klepzig
Comparison of Lindgren funnel SPB trap catches in Taladega
National Forest: Standard lures vs. addition of endo-
brevicomin. John Riggins
Adaptive management of forest pests? Matt Ayres
Definition of outbreak. Stephen Clarke |
| 2:30-3:30PM | Forest Health Task Force (Carolina) |
| 3:30-5:00 | State Cooperators Meeting (McRae) |
| 3:00-5:00PM | Poster Setup (Magnolia and Dogwood) |
| 3:00-7:00PM | Meeting Registration (Lower Lobby) |
| 4:45-5:15PM | AD Hopkins Award Committee (Carolina) |
| 5:15-5:45PM | Executive Team Meeting (McRae) |
| 6:30-8:30PM | Mixer and Reception (at Le Catalan Restaurant, 224 S. Water Street) |

Wednesday, July 21st

Breakfast on your own

- 8:00AM-Noon Registration (Lower Lobby)
- General Session** (Magnolia/Dogwood)
8:30-8:35 Welcome – Bud Mayfield, SFIWC Chair
- 8:35-9:00 Opening Presentation – Forest Management in a Changing Environment.
Al Lucier, NCASI
- 9:00-9:45AM Opening Business Meeting
- 9:45-10:00AM Roger F. Anderson / AD Hopkins Award
- 10:00-10:30AM Break and Group Photos
- 10:30-12:00PM Plenary Session: Invasives and Landscapes
 Landscapes defined – Bob Coulson
 Pathways and invasives – Frank Koch and Dennis Yemshanov
 Hemlock woolly adelgid landscape genetics: tools for examining
 origin and spread– Nathan Havill
- 12:00-1:30PM Lunch on your own
- 1:30-2:30 AD Hopkins Award Presentation – Scott Salom
- 2:30-5:15 PM Graduate Student Session - Jamie Dinkins and Laurel Haavik, Moderators
- Feeding behavior of hemlock woolly adelgid. Kelly Oten and Fred Hain
- Evaluation of hybridization among three *Laricobius* species, predators of the hemlock
 woolly adelgid (Adelgidae). Melissa Fischer, Scott Salom and Loke T. Kok
- Laricobius nigrinus* dispersal dynamics in the eastern United States. Gina A. Davis,
 Carlyle C. Brewster, Scott M. Salom and Lok T. Kok
- Gene expression changes in Fraser fir due to balsam woolly adelgid infestation. Jennifer
 Emerson, Ross Whetten and Len van Zyl, John Frampton
- 3:15-3:45 PM Break
- Use of the wasp, *Cerceris fumipennis*, to detect pest Buprestidae in North Carolina.
 Whitney Swink and Christine Nalepa

Seasonal effects of first commercial thinning on *Ips* beetle activity in north Mississippi loblolly pine stands. James D. Floyd, Andrew J. Londo, John J. Riggins and T. Evan Nebeker

The biology of southern pine beetle (*Dendroctonus frontalis* Zimmerman) in the non-traditional host species white pine (*Pinus strobes*). Micah Gardner and Fred Hain

Effect of habitat fragmentation on the spatial population genetic structure of southern pine beetle (*Dendroctonus frontalis*). Solomon G. Hailu, Kamal M. Ibrahim, Edward J. Heist, John D. Reeve

Oviposition and colonization preferences of *Sirex noctilio* on southern pine species. Jamie E. Dinkins, John J. Riggins, Vic Mastro, Kelley E. Zylstra and Kamal J.K. Gandhi

North American host tree response to *Amylostereum areolatum*, the fungal symbiont of *Sirex noctilio*. Sarah Pears and Kimberly Wallin

Arkansas Siricidae: Adult phenology and nematode parasites. Danielle Keeler, Don Steinkraus and Fred Stephen

6:30-9:30 Banquet (Camelia/Azalea)

Thursday, July 22nd

Breakfast on your own

8:30-10:00AM

Concurrent Session 1

- A. Hemlock Woolly Adelgid (Magnolia) – Scott Salom and Robert Jetton
 - a. Ongoing and future activities regarding biological and chemical control of HWA. Ashley Lamb and Scott Salom
 - b. The interactions of woolly Adelgids and their hosts: Potential for host resistance and restoration. Fred Hain and Kelly Oten
 - c. Hemlock gene conservation, breeding, and restoration: Preparing for the future. Robert Jetton, N.C. State University.
- B. 2012 Risk Map (Dogwood) – Steve Clarke and Dale Starkey
 - a. Strategies for characterizing uncertainty in the national insect and disease risk map. Frank Koch, Frank Krist, Frank Sapio, and Denys Yemshanov
 - b. Host layers: current maps, update on progress, validation procedures. Risk map: discussion of process and description of variables available for modeling. Frank Sapio
 - c. Pests included in next risk map and model development sub-teams. Special pest models. Dale Starkey
 - d. Hands-on computer risk-mapping for SPB, EAB, and oak decline. Break-out groups

10:00-10:30AM

Break

10:30-12:00PM

Concurrent Session 2

- A. Siricid Woodwasp (Dogwood) – Kamal Gandhi
 - a. Detection and ecology of *Sirex noctilio*. Matt Ayres
 - b. Chemical ecology of the woodwasp *Sirex noctilio*. Katalin Böröczky, Damon J. Crook, Kelley E. Zylstra, Victor C. Mastro, and James H. Tumlinson
 - c. Molecular features of the pine response to *Sirex mucus*. Jeffrey Dean and John Michael Bordeaux
 - d. In pursuit of natural history and natural enemies of Arkansas Siricidae. Larry Galligan, Danielle Keeler, Ace Lynn-Miller and Fred Stephen
- B. New developments in chemical and non-traditional insect control tactics (Magnolia) – Brian Strom
 - a. Evaluating tree protectants against bark beetles: methods and results. Brian Strom
 - b. An update on new control options for leafcutting ants, tip moth and invasive pests in Texas. Don Grosman, Bill Upton and Billi Kavanagh

- c. Fungicides in managing forest insects - theory and reality.
Kier Klepzig and Brian Strom
- d. The 'endo' SPB management with frontalin? Stephen Clarke

12:00-1:30PM

Lunch on your own

1:30-3:00PM

Afternoon Activities

Frustrana Cup and Frontalis Cup

4:30-6:00PM

Poster Session/Photo Salon (Magnolia/Dogwood) – Laurie Reid

Friday, July 23rd

Breakfast on your own

8:30-10:00AM

Concurrent Session 3

- A. Invasive beetle highlights – ambrosia, red bay, thousand cankers, EAB, etc. (Magnolia) – Bob Rabaglia
 - a. Bob Rabaglia: Non-native bark and ambrosia beetles in the southeast
 - b. Jim Hanula: Redbay ambrosia beetle and laurel wilt
 - c. Tom Coleman: Walnut twig beetle and thousand cankers disease
 - d. Phil Bell: Emerald ash borer
 - e. Tom Coleman: Goldspotted oak borer

- B. Forest health considerations of focused forest management plans. (Dogwood) – Stephen Clarke
 - a. Introduction. Stephen Clarke
 - b. Overview of RCW management objectives and requirements. Susan Miller
 - c. RCW Management: without forest health input, do we get the bird? Stephen Clarke
 - d. What Happens When you Warm a Bug? Reassessing Forest Risk a Under a Changing Climate. Steve McNulty
 - e. Insects & Diseases of Longleaf Pine in the Context of Longleaf Ecosystem Restoration. Jeffrey Eickwort

10:00-10:30

Break

10:30-12:00

Closing Business Meeting (Magnolia)

SFIWC 2010 POSTERS (Magnolia/Dogwood)

Exotic Pest Information Collection and Analysis (EPICA): Plant Pest Early Warning as a Safeguarding Tool

J. M. Fritz, S. E. Emerine, M. J. Moan, and H. E. Meissner
NCSU Center for Integrated Pest Management, Raleigh, NC

Flight Patterns of Pine Engraver Beetles (*Ips* spp.) in the Piedmont Region of Georgia

Kayla A. Brownell, Daniel R. Miller and Kamal J.K. Gandhi
Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA

Effect of Habitat Fragmentation of the Spatial Population Genetic Structure of Southern Pine Beetle (*Dendroctonus frontalis*)

Solomon G. Hailu, Dr. Kamal M. Ibrahim, Dr. Edward J. Heist, Dr. John D. Reeve
Department of Zoology, Southern Illinois University, Carbondale, IL

A Brief Evaluation of the Current Southern Pine Beetle Hazard Map

Jenny Staeben¹, Kamal Gandhi¹, John Nowak², James Johnson³, Nate Nibbelink¹
¹*University of Georgia*, ²*USDA Forest Service*, ³*Georgia Forestry Commission*

Current Understanding of an Emergent Native Oak Forest Pest: Red Oak Borer Outbreak & Population Crash

Laurel J. Haavik¹, Joshua S. Jones², Fred M. Stephen¹
¹*Department of Entomology, University of Arkansas, Fayetteville, AR*
²*Department of Geosciences, University of Arkansas, Fayetteville, AR*

Ethanol and (-)-alpha-pinene for detecting and monitoring bark and ambrosia beetles in southeastern USA

Daniel R. Miller, Robert J. Rabaglia and Christopher M. Crowe
USDA Forest Service, Southern Research Station, Athens, GA

Attractant kairomone lure blend for the southern pine sawyer, *Monochamus titillator* (Coleoptera: Cerambycidae)

Daniel R. Miller, Chris Asaro, Christopher M. Crowe, James R. Meeker and Donald A. Duerr
USDA Forest Service, Southern Research Station, Athens, GA

Attaching lures to multiple funnel traps: Inside or outside funnels?

Daniel R. Miller, Christopher M. Crowe, Brittany F. Barnes, Kamal J.K. Gandhi and Donald A. Duerr
USDA Forest Service, Southern Research Station, Athens, GA

An Assessment of the Distribution and Biology of Native Siricidae and Associated Hymenopteran Parasitoid Species in the Southeastern U.S.A.

Barnes, B.F, C, Asaro, W. Johnson, J.R Meeker, D. Miller, and K.J.K. Gandhi
USDA Forest Service, Southern Research Station, Athens, GA

Effects of Beetle Predator Species on Hemlock Woolly Adelgid in the Southern Appalachian Mountains of Georgia, USA

Angela M. Mech¹, J. Rusty Rhea², James L. Hanula³ & Kamal J.K. Gandhi¹

¹ *Warnell School of Forestry and Natural Resources, Athens, GA*

² *USDA Forest Service, Forest Health Protection, Asheville, NC*

³ *USDA Forest Service, Southern Research Station, Athens, GA*

**The Exotic Wood Borer/Bark Beetle National Survey:
A Key Survey of the Cooperative Agricultural Pest Survey Program (CAPS)**

Lisa D. Jackson and Talitha Price

*USDA Animal and Plant Health Inspection Service, Plant Protection and Quarantine,
Center for Plant Health Science and Technology, Raleigh, NC*

Preliminary PCR analysis of gut contents in *Thanasimus dubius* (Cleridae)

Ryann Campbell, David Cross, Mike Caprio, Andy Londo, Jeremy Allison, Erich Scholler, John Riggins

Department of Entomology and Plant Pathology, Mississippi State University, Mississippi State, MS

Bark Beetle and Subterranean Termite Interactions: Implications for Forest Utilization

Nathan S. Little and John J. Riggins

Department of Entomology and Plant Pathology, Mississippi State University, Mississippi State, MS

Effects of prescribed-burning, sub-cortical insects, and associated fungi on loblolly pines in Georgia

Jordan L Burke¹, James L Hanula², Scott Horn², Stephen W Fraedrich², Kamal JK Gandhi²

¹ *Daniel B. Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA*

² *Southern Research Station, USDA Forest Service, Athens, GA*

Seasonal Effects of First Commercial Thinning on *Ips* Beetle Activity in North Mississippi Loblolly Pine Stands

James D. Floyd, Dr. Andrew J. Londo, Dr. John J. Riggins and Dr. T.E. Nebeker
*Department of Forestry Extension, Department of Entomology and Plant Pathology,
Mississippi State University, Mississippi State, MS*

Recovery of Introduced Biological Control Agents on Southern Hemlocks: So What?

Jerome F. Grant, Abdul Hakeem, Gregory J. Wiggins, and Paris L. Lambdin

The University of Tennessee, Knoxville, TN

Cicadas in the Midst: A Glimpse of the 17-Year Periodical Cicada in a Mixed Stand of Eastern Hemlock.

Gregory J. Wiggins, Abdul Hakeem, Renee Follum, Jerome F. Grant, and Paris L. Lambdin

The University of Tennessee, Knoxville, TN

Predatory Beetles Unite! Multiple Introduced Species Coexist on Eastern Hemlock.

Abdul Hakeem¹, Jerome F. Grant¹, Gregory J. Wiggins¹, Rusty Rhea², and Paris L. Lambdin¹

¹*The University of Tennessee, Knoxville, TN*

²*USDA Forest Service, Forest Health Protection, Asheville, NC*

Evaluation of stem-injected emamectin benzoate for protection of western white pine from the mountain pine beetle in California

B. L. Strom¹, S. L. Smith², J. B. Fischer³

¹*USDA Forest Service, Southern Research Station, Pineville, LA*

²*USDA Forest Service, Region 5 Forest Health Protection, Vallejo, CA*

³*USDA Forest Service, Southern Research Station, Auburn, AL*

Spatial and temporal distribution of imidacloprid and its metabolites, 5-hydroxy-imidacloprid and olefin-imidacloprid in eastern hemlocks in the southern Appalachians

C. I. Dilling¹, P. L. Lambdin¹, J. F. Grant¹, and R. Rhea²

¹*Department of Entomology and Plant Pathology, University of Tennessee, Knoxville, TN*

²*USDA Forest Service, Forest Health Protection, Asheville, NC*

An Analysis of the Influences of Forest Fragmentation on Southern Pine Beetle

Zachary E Arcaro¹, Frank H Koch², Fred P Hain¹

¹*Department of Entomology, North Carolina State University, Raleigh, NC*

²*Department of Forestry and Environmental Recourses, North Carolina State University, Raleigh, NC*

Starting Off in Process Control and Quality Control Systems in Predator Rearing Programs

Allen C. Cohen¹, Fred Hain¹, Carole Cheah², Thom Hodgson¹, Kathleen Kidd³

¹*North Carolina State University, Raleigh, NC*

²*CT Ag. Exp. Station*

³*NCDA Plant Industry-Plant Protection*

Beyond book learning in natural resources: cultivating pedagogy of service-learning through local and international partnerships

Kimberly F. Wallin¹, Kimberly DePasquale¹, Sarah Pears¹, Susan Leff², and Byron Murray³

¹ *University of Vermont, Rubenstein School of Environment and Natural Resources*

² *Executive Director, Hillel at University of Vermont*

³ *Former Director, Israel Center of Vermont, currently Israel Government Fellowship through the Menachem Begin Center*

Niche overlap among fungal associates of native and non-native insects in North American pine species

Sarah L. Pears and Kimberly F. Wallin

University of Vermont, Rubenstein School of Environment and Natural Resources

Host resistance screening for balsam woolly adelgid: early response from 12 fir species

Leslie Newton¹, Fred Hain¹, John Frampton²

¹ *Department of Entomology*

² *Department of Forestry and Environmental Resources*

Thousand cankers pathway assessment: *Geosmithia* sp. and *Pityophthorus juglandis* movement from the western into the eastern United States

Leslie Newton¹, Glenn Fowler¹, Alison Neeley¹, Robert Schall¹, Yu Takeuchi¹, Scott Pfister²

¹ *USDA APHIS PPQ CPHST Plant Epidemiology and Risk Analysis Laboratory, Raleigh, NC;*

² *USDA APHIS PPQ Emergency and Domestic Programs, Riverdale, MD*

Title: ForestryImages: From the 2001 SFIWC Photo archive to Now

G. Keith Douce, C.T. Barger, D.J. Moorhead and J.H. LaForest.

Center for Invasive Species & Ecosystem Health, University of Georgia, Tifton, GA

NOTES

NOTES

53rd SFIWC Program Summary

Tuesday, July 20 th	Wednesday, July 21 st	Thursday, July 22 nd	Friday, July 23 rd
	Breakfast on your own	Breakfast on your own	Breakfast on your own
	8:00AM-Noon Registration (Lower Lobby)	8:30-10:00AM Concurrent Session 1 (Magnolia)	8:30-10:00AM Concurrent Session 3
1:00-2:30PM (Carolina) SPB Working Group	General Session (Magnolia and Dogwood) 8:30-8:35 Welcome 8:35-9:00 Opening Presentation – Forest Management in a Changing Environment	A. Hemlock Woolly Adelgid – Scott Salom and Robert Jetton (Magnolia)	A. Invasive beetle highlights – ambrosia, red bay, thousand cankers, EAB, etc. – Bob Rabaglia (Magnolia)
2:30-3:30PM (Carolina) Forest Health Task Force	9:00-9:45AM Opening Business Meeting	B. 2012 Risk Map – Steve Clarke (Dogwood)	B. Current forest management (RCW, SPB) – a debate – Steve Clarke (Dogwood)
3:30-5:00 (McRae) State Cooperators Meeting	9:45-10:00AM Roger F. Anderson / AD Hopkins Award	10:00-10:30AM Break	
3:00-5:00PM Poster Setup	10:00-10:30AM Break and Group Photos	10:30-12:00PM Concurrent Session 2	10:00-10:30 Break
3:00-7:00PM (Lower Lobby) Meeting Registration	10:30-12:00PM - Plenary Session: Invasives and Landscapes	A. Sirex Woodwasp – Kamal Gandhi (Dogwood)	10:30-12:00 Closing Business Meeting (Magnolia)
4:45-5:15PM (Carolina) AD Hopkins Award Committee	12:00-1:30PM Lunch on your own	B. New developments in chemical and non-traditional insect control tactics – Brian Strom (Magnolia)	
5:15-5:45PM (McRae) Executive Team	1:30-2:30 AD Hopkins Award Presentation	12:00-1:30PM Lunch on your own	
6:30-8:30PM Mixer and Reception (LeCatalan Restaurant, 224 S. Water St.)	2:30-3:30 Graduate Student Session	1:30-3:00PM Afternoon Activities	
	3:30-3:45 Break	Frustrana Cup and Frontalis Cup	
	3:45-5:15 Graduate Student Session	4:30-6:00PM Poster Session/Photo Salon (Grand Ballroom) – Laurie Reid	
	6:30-9:30 Banquet (Camelia and Azalea)		