

**FLORIDA ENTOMOLOGICAL SOCIETY
94TH ANNUAL MEETING PRESENTATIONS**

SUNDAY, JULY 24, 2011

2:00 – 6:00

OFFICE/PRESENTATION PREVIEW *Cypress*

2:00 – 6:00

REGISTRATION *Registration Desk*

MONDAY MORNING, JULY 25, 2011

8:00 – 5:00

OFFICE/PRESENTATION PREVIEW *Cypress*

8:00 – 5:00

REGISTRATION *Registration Desk*

GENERAL SESSION *Wayne Hunter, Presiding Everglades BC*

8:00 Welcoming Remarks

8:10 – 8:30 **PRESIDENTIAL ADDRESS:** RNA Interference and the Future of Insect Pest Management. **Wayne Hunter**, USDA, ARS, U.S. Horticultural Research Lab, Fort Pierce, FL

8:30 – 9:20 **PIONEER LECTURE HONOREE** **Dempsey R. Sapp, Sr.**

2011 Pioneer Lecturer: Dempsey R. Sapp, Jr., President and CEO, Florida Pest Control
Title: *The Life and Contributions of Dempsey R. Sapp, Sr.*

9:20 – 10:00 **Break** *Everglades Foyer*

9:30 – 10:00 **BUSINESS MEETING** *Everglades BC*

10:00 – 12:00 **INVASIVE SPECIES SYMPOSIUM** *Caloosa B*

12:00 – 1:00 **LUNCH BREAK** (On your own)

12:00 – 1:00 **LUNCHEON – Graduate students with Pioneer Lecturer** *Everglades A*

8:00 – 5:00

POSTER DISPLAY SESSION 1 (Authors present from 2:00 – 3:00 PM; take down by 5:00 PM) *Island*

DSP1

***Candidatus Liberibacter asiaticus* Infection Modifies Host Preference of *Diaphorina Citri* Kuwayama (Hemiptera: Psyllidae) Via Mechanisms Which May Enhance Transmission.** Hermann, Sara L., Mann, R.S., Ali, J.G., Tiwari, S., Pelz-Stelinski, K., Alborn, H.T., and Stelinski, L.L. University of Florida Entomology and Nematology Department Citrus Research and Education Center (IFAS-CREC) 700 Experiment Station Road, Lake Alfred, FL 33850. slhermann@mail.usf.edu

DSP2

***Tuta absoluta* (Lepidoptera: Gelechiidae), a Species of Concern to Agriculture in Florida.** Julieta Brambila. USDA-APHIS-PPQ, P.O. Box 147100, Gainesville, FL 32614.

DSP3

Baseline Susceptibility Study for Cyantraniliprole (Cyazypyr™ 20 SC, DPX-HGW86) To Pepper Weevil, *Anthonomus eugenii* Cano (Coleoptera: Curculionidae). Rafael Caballero¹, David Schuster¹, Hugh Smith¹ and Hector Portillo². ¹Gulf Coast Research and Education Center, University of Florida. 14625 C.R. 672. Wimauma, FL 3359, rcaballero@ufl.edu. ²DuPont Crop Protection, Stine-Haskell Research Center. 1090 Elkton Road. Newark, DE 19711.

DSP4

***Calophya latiforceps*, a New Species of Jumping Plant Lice (Hemiptera: Calophyidae) Associated with *Schinus terebinthifolius* (Anacardiaceae) in Brazil.** D. Burckhardt, J. P. Cuda, V. Manrique, R. Diaz, W. A. Overholt, D. A. Williams, L. R. Christ, And M. D. Vitorino. University of Florida, Department of Entomology & Nematology, P. O. Box 110620, Gainesville, FL 32611-0620. jcuda@ufl.edu

DSP5

Thrips Species in Wheat Production Areas of Lakes District of Turkey. Ozan Demirözer, Joseph Funderburk, and Mrittunjai Srivastava. North Florida Research and Education Center, 155 Research Road, Quincy, FL 32351-5677. odemirozer@ufl.edu

DSP6

Efficacy of Essential Oil Lures for Detection of Redbay Ambrosia Beetle, *Xyleborus glabratus* (Coleoptera: Curculionidae: Scolytinae). Paul E. Kendra, Jerome Niogret, Wayne S. Montgomery, Jorge S. Sanchez, Jorge E. Peña, Nancy D. Epsky, and Robert R. Heath. USDA-ARS, Subtropical Horticulture Research Station, 13601 Old Cutler Rd., Miami, FL 33158. paul.kendra@ars.usda.gov

DSP7

Scolytinae (Coleoptera: Curculionidae) Inhabiting Avocado (*Persea americana*) in Florida. R. E. Duncan, M. Thomas, G. Brar, S. McLean and J. E. Pena. University of Florida, Tropical Research and Education Center, 18905 SW 280th Street, Homestead, FL 33031. red@ifas.ufl.edu

DSP8

Chemical Control of Scolytinae (Coleoptera: Curculionidae) Infesting Avocado (*Persea americana*) in Florida. J. E. Pena, R. E. Duncan, R. Cave, Jonathan H. Crane, Paul Kendra and J. Capinera. University of Florida, Tropical Research and Education Center, 18905 SW 280th Street, Homestead, FL 33031. red@ifas.ufl.edu

DSP9

Effectiveness of Surfactants and Physical Control of *Brevipalpus phoenicis* Infesting Lemons. Ignacio Baez, M. Hennessey, K. Santos, D. Carrillo, R. E. Duncan and Jorge E. Pena. University of Florida, Tropical Research and Education Center, 18905 SW 280th Street, Homestead, FL 33031. red@ifas.ufl.edu

DSP10

Choice Tests of Silverleaf Whitefly, *Bemisia tabaci* B Biotype, on Zucchini Squash and Buckwheat and the Effect of *Delphastus Catalinae* on Whitefly Population Densities. Janine Razze and Oscar E. Liburd. University of Florida, Entomology and Nematology Department, Bldg. 970 Natural Area Drive, PO Box 110620, Gainesville, FL 32611. jrazze@ufl.edu

DSP11

Potential Attractants for the Redbay Ambrosia Beetle (*Xyleborus glabratus* Eichhoff). Elena M. Rhodes. University of Florida, North Florida Research and Education Center, 155 Research Road, Quincy, FL 32351-5677. erhodes@ufl.edu

DSP12

Development of a Pest Management Decision Support System for the Management of Ornamental Plants. Alfredo Rios, Luis Cañas, Christopher Ranger, Michael Reding, Randall Zondag, and Heping Zhu. OARDC/Entomology Department, The Ohio State University, 1680 Madison Avenue, Wooster 44691. rios.43@osu.edu

DSP13

Evaluation of *Metarhizium anisopliae* Strains to Control the Grass Spittlebug *Prosapia* sp. Osvaldo Avalos-de León, Jesús M. Villegas-Mendoza, Alejandro Sánchez-Varela, and Ninfa M. Rosas-García. Centro de Biotecnología Genómica, Instituto Politécnico Nacional Blvd., Del Maestro s/n esq. Elías Piña Colonia Narciso Mendoza CP 88710, Reynosa Tamaulipas, México. nrosas@ipn.mx; ninfarosag@yahoo.com.mx

DSP14

Management of Western Flower Thrips on Pepper and Tomato in North Florida. Mrittunjai Srivastava, J.E. Funderburk, Ozan Demirözer, and Steve Olson. North Florida Research and Education Center, IFAS, University of Florida, 155 Research Road, Quincy, FL 32351-5677. mruttunjai@ufl.edu

SYMPOSIUM: Invasive Species: Are We Communicating? *Caloosa B*

Organizers: **Lance Osborne**, University of Florida-IFAS, MREC, **Amanda Hodges**, University of Florida-IFAS, and **Stephanie Stocks**, University of Florida-IFAS

10:00 [1]

Introduction: Remarks and Lessons Learned from Past Introductions. Lance Osborne. University of Florida-IFAS, MREC, Apopka, FL 32703.

10:18 [2]

An Opinion from the Ornamental Industry. Lin Schmale. Society of American Florists, Alexandria, VA 22314.

10:36 [3]

Responding to Exotic Species in Florida-a State Perspective. Wayne Dixon, Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, FL 32608.

10:54 [4]

Research Needs for Invasive Species in Florida, (*Bemisia tabaci*, Q biotype). Cindy McKenzie. US Horticultural Research Lab, ARS, USDA, Ft. Pierce, FL 34945.

11:12 [5]

Reaching Traditional and Non-Traditional Clientele. Amanda Hodges and Stephanie Stocks. University of Florida-IFAS, Gainesville, FL 32611.

11:30

Group Discussion, Are We Communicating (30 minutes).

12:00-1:00 Lunch (on your own)

Monday Afternoon, July 25th

SYMPOSIUM-INDUSTRY: Advances in Vegetable Entomology Research in Florida: a Tribute to the Research Programs of Dr. Dave Schuster *Everglades BC*

Organizers: **Joe Eger**, Dow AgroSciences, **Jim Price**, University of Florida – IFAS, GCREC, Wimauma, and **Scott Ferguson**, Atlantic Turf & Ornamental Consulting

1:10

Introduction

1:15 [6]

Entomologist David Schuster: A Leading Partner to Florida's Vegetable Industry. Jack Rechcigl, University of Florida – IFAS, GCREC, Wimauma, FL.

1:35 [7]

Twenty Two Years Fighting Whiteflies. Phil Stansly, University of Florida – IFAS, SWREC, Immokalee, FL.

1:55 [8]

Spatial Statistics and Geographical Information Systems (GIS) for Studying *Bemisia tabaci* and Tomato Yellow Leaf Curl Virus, a Fishing or Catching Expedition? James "Shine" Taylor, University of Florida – IFAS, GCREC, Wimauma, FL.

2:15-2:35 Coffee Break *Everglades Foyer*

2:35 [9]

From Pepper Weevil to Fishing: Lessons for Life. Marco Toapanta, Syngenta Vegetables, Kansas City, MO.

2:55 [10]

Whiteflies in Tomatoes: A Florida Perspective. Cindy McKenzie, US Horticultural Research Lab, ARS, USDA, Ft. Pierce, FL.

3:15 [11]

Dave Schuster: Partnering with Industry from Discovery to Practical application. Tony W. Weiss, Dow AgroSciences, Brandon, FL.

3:35 [12]

Thirty Three Years of Fruitful and Memorable Collaborations—Thank You, Dave. Galen Frantz and H. Charles Mellinger, Glades Crop Care, Jupiter, FL.

Student Competition (2:35-5:03), Concurrent Session *Caloosa B*

Moderator: TBA

2:35

Introduction and Instructions

PhD

2:40 [13]

Manipulating Entomopathogenic Nematodes with Belowground Herbivore Induced Plant Volatiles Increases Mortality of Root Weevil. Jared Gregory Ali, Hans T. Alborn, Raquel Campos-Herrera, Larry Duncan, Inna Kuzovkina and Lukasz L. Stelinski. University of Florida,

Entomology and Nematology Department, Citrus Research and Education Center (IFAS-CREC), FL 33850. Jgali@ufl.edu

2:53 [14]

Stimuli Inducing Movement of ACP, *Diaphorina citri*. [Scott Croxton](#) and Dr. Phil Stansly South West Florida Research and Education Center, University of Florida, 2685 SR 29 N, Immokalee, FL 34142. croxtd@ufl.edu

3:06 [15]

Adaptation of Native Generalist Larval Endoparasitoids to an Invasive Host. [Henry Murillo](#), David Hunt and Sherah L. VanLaerhoven. University of Windsor, Biology Department, Insect Ecology & Behaviour Lab, 401 Sunst Ave, Windsor, ON, Canada. N9B 3P4. murillo@uwindsor.ca

3:19 [16]

Effect of Using Sustainable Growing Practices on Spider Mites, Insect Pests and Marketable Yields of Strawberries. [T. W. Nyoike](#) and O. E. Liburd. Entomology & Nematology Dept., University of Florida, Bldg 970 Natural Area Drive, Gainesville, FL 32611. nyoiket@ufl.edu

3:32 [17]

Development of an IPM Program for the Tropical Sod Webworm *Herpetogramma phaeopteralis* Guenée (Lepidoptera: Crambidae: Spilomelinae). [Nastaran Tofangsazi](#), Steven Arthurs, Eileen Buss and Rob Meagher. Mid-Florida Research and Education Center, University of Florida, 2725 Binion Rd, Apopka, FL 32703. ntsazi@ufl.edu

3:45 [18]

Stochastic Simulation of Termite Dispersal in a Homogeneous Environment Using an Individual-Based Modeling Approach. [Francesco Tonini](#), Rudolf H. Scheffrahn, and Hartwig H. Hochmair. Ft. Lauderdale Research & Education Center - University of Florida 11037 SW 139th Place, Miami, FL 33186. ftonini@ufl.edu

MS

3:58 [19]

Species Complex and Monitoring For Stink Bugs in Blackberries. [Sara A Brennan](#) and Oscar E. Liburd. University of Florida Entomology and Nematology Department, 970 Natural Area Drive, PO BOX 110620, Gainesville, FL 32611. sbrennan@ufl.edu

4:11 [20]

Complex and Seasonal Incidence of Leafminer Hymenopteran Parasitoids on Beans in South Florida. [Jian Li](#), Dakshina. R. Seal, Gary L. Leibee, and Oscar E. Liburd. University of Florida, Tropical Research and Education Center, 18905 SW 280TH ST, Homestead, FL 33031 18905 SW 280TH ST, jli59@ufl.edu

4:24 [21]

Oviposition Substrate Preference and Development Ability of Stable Flies (*Stomoxys calcitrans*) and House Flies (*Musca domestica*) in Common Equine Substrates to Improve Integrated Pest Management for North Florida Small Equestrian Farms. Erika Machtinger, Christopher Geden, Norman C. Leppa and Jerome Hogsette. University of Florida, Entomology and Nematology Department, 970 Natural Area Drive, PO Box 110620, Gainesville, FL 32611. irishtangerine@ufl.edu

4:37 [22]

Studies of Isotope Composition as a Biological Marker in *Lasioderma serricorne*. Lemeisha D. Jones and Rizana M. Mahroof. Department of Biological and Physical Sciences, South Carolina State University, P. O. Box 7365, 300 College Street NE, Orangeburg, SC 29117. rmahroof@scsu.edu

4:50 [23]

Elemental Markers for Stored Products Insects. Daniel S. Clark and Rizana M. Mahroof. Department of Biological and Physical Sciences, South Carolina State University, P. O. Box 7365, 300 College Street NE, Orangeburg, SC 29117. rmahroof@scsu.edu

6:30-8:30 **RECEPTION/MIXER** *Gardens Ballroom*

We gratefully thank and acknowledge our sponsors: **Syngenta Crop Protection, Dow AgroSciences, Chemtura AgroSolutions, Gowan Company, and DuChene, Reid and Associates.**

Tuesday Morning, July 26th

7:00-8:00 **Past Presidents' Breakfast** *Tarpon House*

8:00-12:00 **Registration (contd.)**

8:00 – 5:00

POSTER DISPLAY SESSION 2 (Authors present from 2:00 – 3:00 PM; take down by 5:00 PM) *Island Room*

DSP15

Evaluation of Insecticidal Peptides against Phloem Feeding Citrus Pests. Kirsten S. Pelz-Stelinski, Harsimran K. Gill, Gaurav Goyal, and Siddarme Gowda. Citrus Research and Education Center, 700 Experiment Station Rd, Lake Alfred, FL 33850. pelzstelinski@ufl.edu

DSP16

RNA Interference Reduces Viral Disease. Wayne B. Hunter, Rohan Reddy, and Xiomara H. Sinisterra. USDA, ARS, U.S. Horticultural Research Lab, 2001 South Rock Road, Fort Pierce, FL, 34945. Wayne.hunter@ars.usda.gov

DSP17

Psyllid Genome Analysis Reveals Unique Features for Designing Specific Control Strategies. Wayne B. Hunter and Blake R. Bextine. USDA, ARS, U.S. Horticultural Research Lab, 2001 South Rock Road, Fort Pierce, FL, 34945. Wayne.hunter@ars.usda.gov

DSP18

dsRNA Movement from Rootstock to Scion in Citrus Trees. Wayne B. Hunter, Blake R. Bextine, Ed Stover, and Xiomara H. Sinisterra. USDA, ARS, U.S. Horticultural Research Lab, 2001 South Rock Road, Fort Pierce, FL, 34945. Wayne.hunter@ars.usda.gov

DSP19

Systemic RNA interference, RNAi, in Hemiptera: Psyllids and Leafhoppers Pests of Citrus and Grapevines. Wayne B. Hunter, Blake R. Bextine, and Xiomara H. Sinisterra. USDA, ARS, U.S. Horticultural Research Lab, 2001 South Rock Road, Fort Pierce, FL, 34945. Wayne.hunter@ars.usda.gov

Contributed Papers *Caloosa A*

Moderator: TBA

8:00

Introduction

8:05 [24]

Experiences on Integrated Pest Management of Coffee Berry Borer CBB in Colombia
Luis F. Aristizábal, Mauricio Jiménez, Alex E. Bustillo, and Steven P. Arthurs. University of Florida, Mid-Florida Research and Education Center, Apopka, FL 32703. larist@ufl.edu

8:20 [25]

The Bean Plataspid, Coming Soon to Florida? J. E. Eger. Dow AgroSciences, 2606 S. Dundee St., Tampa, FL 33629. jeeger@dow.com.

8:35 [26]

Spatial Association of Marine Dockage with Land-Borne Infestations of Invasive Termites (Isoptera: Rhinotermitidae, *Coptotermes*) in Urban South Florida. Hartwig H. Hochmair and Rudolf H. Scheffrahn. University of Florida, Fort Lauderdale Research & Education Center, 3205 College Avenue, Davie, Florida 33314. [hhhochmair@ufl.edu](mailto:hhochmair@ufl.edu)

8:50 [27]

Phenology and Management of the Citrus Leafminer *Phyllocnistis citrella* (Lepidoptera: Gracillariidae) in Southwest Florida Citrus. Moneen M. Jones and Phil Stansly. Southwest Florida Research and Education Center, 2685 SR 29 N., Immokalee, FL 34142. mmjones2@ufl.edu

9:05 [28]

Developing Regulatory Ecosystem Services as IPM Tools: Trap Crops and Other Tactics. Russell F. Mizell, III and T. Charles Riddle. NFREC-Quincy, UF-IFAS, 155 Research Rd, Quincy, FL 32351-5684. rfmizell@ufl.edu.

9:20 [29]

Crape Myrtles, *Lagerstroemia indica* and *L. faurei* Are Important But Unknown Pollen Sources for Many Native and Exotic Pollinator Species in the Southern U.S. Russell F. Mizell, III and T. Charles Riddle. NFREC-Quincy, UF-IFAS, 155 Research Rd, Quincy, FL 32351-5684. rfmizell@ufl.edu

9:35 [30]

Thresholds for HLB Vector Control in Infected Commercial Citrus and Compatibility with Biological Control. Cesar Monzo and Philip A. Stansly. Southwest Florida Research and Education Center, Institute of Food and Agricultural Sciences, University of Florida, 2685 SR 29 N., Immokalee, Florida 34142-9515. cmonzo@ufl.edu

9:50-10:10 AM Coffee Break *Caloosa Foyer*

10:10 [31]

Augmentative Release of the Parasitic Wasp *Tamarixia radiata* (Hymenoptera: Eulophidae) to Enhance Biological Control of *Diaphorina citri* (Hemiptera: Psyllidae) in Florida. Jawwad A. Qureshi and Philip A. Stansly. University of Florida, Southwest Florida Research and Education Center, 2685 SR 29 N, Immokalee, FL 34142. jawwadq@ufl.edu

10:25 [32]

Novel, Hands-On Educational Methods for Pest Control Professionals. Ellen Thoms. Dow AgroSciences, 7257 NW 4th Blvd, #20, Gainesville, FL 32607. emthoms@dow.com

10:40 [33]

Evaluation of Tuber Characteristics on the Larval Infestation Potential of the Andean Potato Weevil (*Premnotrypes Suturicallus*). Alfredo Rios. OARDC/Entomology Department, The Ohio State University, 1680 Madison Avenue, Wooster 44691. rios.43@osu.edu

10:55 [34]

Evaluation and Implications of Andean Potato Weevil Infestation Sources for Its Management in the Andean Region. Alfredo A Rios and Jurgen Kroschel. OARDC/Entomology Department, The Ohio State University, 1680 Madison Avenue, Wooster 44691. rios.43@osu.edu

11:10 [35]

Eradication of an Invasive Termite: *Nasutitermes corniger* (Isoptera: Termitidae: Nasutitermitinae) from Southeastern Florida. Rudolf H. Scheffrahn, Hartwig H. Hochmair, William H. Kern Jr., Jan Krecek, Boudanath Maharajh, John Warner, Brian J. Cabrera, Robert B. Hickman, and Steven E. Dwinell. University of Florida, Fort Lauderdale Research & Education Center, 3205 College Avenue, Davie, Florida 33314. rhsc@ufl.edu

11:25 [36]

New Insecticides for Managing *Bemisia tabaci* and Tomato Yellow Leaf Curl Virus on Tomato. Hugh A. Smith and David J. Schuster. University of Florida, Gulf Coast Research and Education Center, 14625 CR 672, Wimauma, FL, 33598. hughasmith@ufl.edu

11:40 [37]

Flea Beetles (Coleoptera: Chrysomelidae) in Florida Blueberries: Cultivar Preferences and Management. Craig R. Roubos, Oscar E. Liburd, and Teresia W. Nyoike. University of Florida, Entomology and Nematology Department, Bldg. 970 Natural Area Drive, Gainesville, FL 3261. roubosc@ufl.edu

Tuesday Afternoon, July 26th

12:00-2:00

Awards Banquet *Everglades A*

SYMPOSIUM: Chilli Thrips: Current Status and Future Challenges *Caloosa A*

Organizer and Moderator: **Dr. Steven Arthurs**, University of Florida, IFAS, Mid-Florida REC

2:00

Introduction: Dr. Steven Arthurs

2:05 [38]

Chilli Thrips in Florida, A Perennial or Transient Problem? Steven Arthurs. Dept. Entomology and Nematology, Mid-Florida REC, Apopka, FL 32703

2:25 [39]

Is Chilli Thrips (*Scirtothrips Dorsalis*) a Significant Pest for the Continental US? Matthew Ciomperlik. USDA APHIS PPQ Center for Plant Health Science and Technology, Mission Laboratory, Edinburg, TX.

2:45 [40]

Sampling, Distribution and Management of Chilli Thrips, *Scirtothrips dorsalis* Hood (Thysanopter: Thripidae). Dakshina R. Seal. Dept. Entomology and Nematology, Tropical REC, Homestead, FL 33031

3:05-3:25 Coffee Break *Caloosa Foyer*

3:25 [41]

A Novel Technique for Direct Correlation of Traditional Morphological Taxonomy with Molecular DNA Barcoding for Identification of Chilli Thrips Using Scanning Electron Microscopy. C. L. McKenzie, V. Kumar, D. R. Seal, and L. S. Osborne. USDA-ARS, Fort Pierce, FL 32945

3:45 [42]

Evaluations of Bioinsecticides to Control Populations of Chilli Thrips, *Scirtothrips dorsalis* (Thysanoptera: Thripidae). Luis F. Aristizábal, Steven S. Arthurs, and Pasco Avery. Dept. Entomology and Nematology, Mid Florida REC, Apopka, FL 32703

4:05 [43]

Preventive and Curative Control of Chilli Thrips *Scirtothrips dorsalis* Hood (Thysanoptera: Thripidae) Using Various Regimes of Biological and Chemical Insecticides. Vivek Kumar, Dakshina R. Seal, Cindy L. McKenzie, David J. Schuster, Lance Osborne, Charles A. Powell and Garima Kakkar. Dept. Entomology and Nematology, Tropical REC, Homestead, FL 33031

4:25 [44]

Ornamental Pepper: A Potential Banker Plant for Establishment of *Amblyseius swirskii* (Acari: Phytoseiidae) to Manage Chilli Thrips. L.S. Osborne, C.L. McKenzie, Y. Xiao, P. B. Avery, and J. Chen. Dept. Entomology and Nematology, Mid Florida REC, Apopka, FL 32703

SYMPOSIUM: Current Research Related To Bed Bugs (Concurrent Session)

Caloosa B

Organizer and Moderator: **Suganth Kannan**, Student, American Heritage School, Plantation, FL

3:25

Introduction:

3:30 [45]

Biology of the Cimicidae and Why Bed Bugs Are Pests. William H. Kern Jr. whk@ufl.edu

3:50 [46]

Heat, Volatiles and Monitoring in Bed Bug Management. Roberto M. Pereira. rpereira@ufl.edu, and Philip G. Koehler. pgk@ufl.edu

4:10 [47]

From Micro to Macro: Spatial Population Genetic Structure in the Bed Bug, *Cimex lectularius*. Warren Booth. wbooth@ncsu.edu

4:30 [48]

New Chambered Heat Treatment of Bed Bugs. Phil Hadley. phil.hadley@collierpestcontrol.com

4:50 [49]

Practical Methods of Bed Bug Treatment. Keith D Ruebling, President, Laure Pest Management. kdr@laurepest.com

5:10 [50]

Green Solution for Bed Bug Eradication. Suganth Kannan. suganthkannan@yahoo.com

Wednesday Morning, July 27th

Free!