

**FLORIDA ENTOMOLOGICAL SOCIETY
2006 ANNUAL MEETING PRESENTATIONS**

SUNDAY, JULY 23, 2006

7:00 -- 5:00

Office

Bonito

1:00 -- 6:00

Registration

Gallery/Lobby

2:00 -- 5:00

Exhibitors

Lobby

6:00

Executive Committee Meeting

Sinclair's

MONDAY, JULY 24, 2006

7:00 -- 5:00

Office/Slide Preview

Bonito/Amberjack

8:00 -- 4:00

Registration

Gallery/Lobby

8:00 -- 5:00

Exhibitors

Lobby

GENERAL SESSION

Rudi Scheffrahn, Presiding

Sailfish

8:00

Welcoming Remarks

8:10 -- 8:30

Presidential Address -- Insect Biodiversity: Gains and Losses

Rudi Scheffrahn

8:30 -- 9:20

Pioneer Lecture

Dr. Lawrence A. Hetrick

2006 Pioneer Lecturer: **Dr. Robert Woodruff**

A Difference of Degrees

9:20 -- 9:45

Break

9:45 -- 11:00

Business Meeting

Dolphin

MONDAY, JULY 24, 2006

POSTER DISPLAY SESSION (Authors present from 1:00 -- 2:00)

Marlin

DSP 1. Survey of Structural Wood-Infesting Beetles in Florida. **Brian Cabrera.**
University of Florida, Ft. Lauderdale Research & Education Center, 3205 College Ave.,
Davie, FL, 33314

DSP 2. Temperature-dependent development of the cycad aulacaspis scale, *Aulacaspis yasumatsui* (Hemiptera: Diaspididae). **Ronald D. Cave** and Cora Sciacchetano.
University of Florida, Indian River REC, 2199 S. Rock Road, Ft. Pierce, FL 34945.

DSP 3. Influence of Temperature and Humidity on Life History Characteristics of *Boreioglycaspis melaleucae* (Hemiptera: Psyllidae), a Biological Control Agent of the Invasive Tree *Melaleuca quinquenervia*. **Robyn N. Chiarelli**, Paul D. Pratt, Cressida S. Silvers, and Ted D. Center. USDA-ARS, 3225 College Avenue, Fort Lauderdale, Florida 33314.

DSP 4. Cytochrome C Oxidase sequence data distinguish a thelytokous subpopulation of *Odontosema anastrephae* from a morphologically identical arrhenotokous subpopulation. **Claudia S. Copeland**, Marjorie Hoy, Ayyamperumal Jeyaprakash, Martin Aluja, John Sivinski. USDA/ARS/CMAVE, 1700 SW 23rd Dr., Gainesville, FL 32608

DSP 5. Biology and Damage of an Undescribed Baridine Weevil on Amaryllis. **Nancy D. Epsky**, Alison Walker, Thomas Weissling and Alan Meerow. USDA, ARS, SHRS, Miami, FL 33158

DSP 6. *Larra bicolor*: Spreading the wasps throughout Florida. **J. H. Frank**, R. K. Sprenkel, and N. C. Leppla. Entomology and Nematology Dept., University of Florida, Gainesville, FL 32611-0630

DSP 7. Why should you care about flesh fly storage proteins? **Daniel A. Hahn**. Department of Entomology and Nematology, University of Florida, P.O. Box 110630, Gainesville, FL

DSP 8. Taking the war against invasive species offshore. Moses T.K. Kairo, Antonio Francis and **Muhammad Haseeb**. Center for Biological Control, Florida Agricultural and Mechanical University, Tallahassee, FL

DSP 9. Stop the Invasion: Empowering Teachers with Knowledge of Invasive Species. **Adrian Hunsberger**, Marella Crane, and Chris Miller. University of Florida/IFAS, Miami-Dade County Extension, Homestead, FL

DSP 10. Gene Expression in Asian Citrus Psyllid: Vector of citrus greening. **Wayne Hunter**. USDA -- ARS, United States Horticultural Research Laboratory, 2001 South Rock Road, Fort Pierce, FL 34945

DSP 11. Gene Expression in two leafhopper vectors of Pierce's Disease of grapes, Glassy-winged sharpshooter and Blue-green sharpshooter. **Wayne Hunter**. USDA -- ARS, United States Horticultural Research Laboratory, 2001 South Rock Road, Fort Pierce, FL 34945

DSP 12. Backyard Composting of Infested Fruit: A Potential Pathway for Introduction of *Anastrepha* Fruit Flies (Diptera: Tephritidae) into Florida. **Paul E. Kendra**, Michael K. Hennessey, Edward M. Jones, Wayne S. Montgomery and Nancy D. Epsky. USDA-ARS, SHRS, Miami, FL 33158-1334

DSP 13. Oviposition in selected generalist predators. **Jesusa C. Legaspi**, Mark A. Jervis and Benjamin C. Legaspi, Jr. USDA, ARS, CMAVE/FAMU-CBC, 6383 Mahan Dr. Tallahassee, FL 32308

DSP 14. An Eriophyid Mite on Loropetalum. **Gary L. Leibeck**. Mid-Florida REC/IFAS/UF, 2725 Binion Road, Apopka, FL 32703-8504

DSP 15. IPM Florida Success Stories, The First Five Years. **N. C. Leppla** & J. L. Gillett. UF/IFAS Statewide IPM Program P.O. Box 110630 Gainesville Florida 32611

DSP 16. Effects of cane trash on Lesser Cornstalk Borer (Lepidoptera : Pyralidae) damage to sugarcane. **Hardev Sandhu** and Gregg Nuessly. University of Florida, Everglades REC, 3200 E. Palm Beach Road, Belle Glade, FL 33430.

MONDAY MORNING, JULY 24, 2006

SYMPOSIUM: Biotype Q of the Sweetpotato Whitefly: An Emerging Threat to Florida Vegetable and Ornamental Crops.

Moderators/Organizers: Lance Osborne, David Schuster

Sailfish

10:00

1. What is Biotype Q and Where Did It Come From? **Lance Osborne**, University of Florida, Mid-Florida Research & Education Center, Apopka, FL

10:20

2. Detection and Spread of Biotype Q in the United States. **Cindy McKenzie**, USDA, ARS, US Horticultural Research Laboratory, Ft. Pierce, FL

10:40

3. Insecticide Resistance in Biotype Q. **David Schuster**, University of Florida, Gulf Coast Research & Education Center, Wimauma, FL

11:00

4. Insecticide Efficacy Trials Against the Q Biotype on Greenhouse Crops. **Ron Oetting**, University of Georgia, College of Agriculture & Environmental Science, Griffin, GA

11:20

5. Prospects for Biological Control of Biotype Q. **Phil Stansly**, University of Florida, Southwest Florida Research & Education Center, Immokalee, FL

11:40

6. The Potential of Biotype Q as a Vector of Plant Viruses in the United States. **Jane Polston**, University of Florida, Department of Plant Pathology, Gainesville, FL

12:00

Closing Comments/Discussion

12:00 -- 1:30 Lunch Break

12:00 -- 1:30 Luncheon -- Graduate students with **Pioneer Lecturer Dr. Woodruff**.
Terrace

MONDAY AFTERNOON, JULY 24, 2006

SYMPOSIUM: The Bed Bug Phenomenon from a Florida Perspective

Organizer and Moderator: Brian Cabrera

Pompano

2:00

7. Welcome and Introduction: An Overview of Bed Bugs. **Brian Cabrera**, University of Florida, Ft. Lauderdale Research & Education Center.

2:20

8. Bed Bug Rearing and Its Obstacles: **Jeff Hertz**, Entomology and Nematology Department, University of Florida, Gainesville, FL.

2:40

9. Treating Bed Bugs Old School Style. **Paul Sugrue**, Nozzle Nolen, West Palm Beach, FL.

3:00

Break

3:20

10. The Re-Introduction of *Cimex* species Into the Residential/Commercial Arena in South Florida and New Management Techniques. **Ron Box**, Hulett Environmental Services, West Palm Beach, FL.

3:40

11. The Human Side of Bed Bug Infestations. **Mel Whitson**, Wellmark International/Zoecon, Melbourne, FL.

4:00

12. The Bed Bug Problem from an Industry Perspective. **John Paige**, Bayer Environmental Science, Vero Beach, FL.

4:20 -- 5:00

Panel Discussion: Bed Bugs Are Here -- What Do We Do Now?

MONDAY AFTERNOON, JULY 24, 2006

CONCURRENT SESSION: Student Paper Competition, Doctor of Philosophy

Organizer/Moderator -- Marco Toapanta

Dolphin

2:00

Introduction and Instructions

2:05

13. Behavioral response of pepper weevil, *Anthonomus eugenii* Cano, to oviposition plugs and associated ovipositional cues. **Karla M. Adesso** and Heather J. McAuslane. University of Florida, Entomology & Nematology Department, 970 Surge Area Drive, P.O. Box 110620, Gainesville, FL 32611

2:19

14. Economic Injury Level and Description of the Damage Inflicted by Flower Thrips, *Frankliniella* spp. in Early-season Blueberries. **Arevalo, H. A.**, and O. E. Liburd. University of Florida, Department of Entomology and Nematology, Bldg. 970 Natural Area Drive, Gainesville, FL 32611

2:33

15. Changes in Gut Carbohydrase Activities in *Reticulitermes flavipes* Workers in Response to Hardwood, Softwood and Cellulose Diets. **Joseph A. Smith** and Philip G. Koehler. Department of Entomology & Nematology, University of Florida, P.O. Box 110620, Gainesville, FL 32611

2:47

16. Oxidative Responses of St. Augustinegrasses Challenged by Southern Chinch Bug, *Blissus insularis* Barber (Hemiptera: Blissidae). **M. Rangasamy**, B. Rathinasabapathi, H. J. McAuslane, R. H. Cherry, and R.T. Nagata. Dept. Of Entomology and Nematology, University of Florida, Gainesville FL 32608

3:01

Break

3:20

17. Evaluation of Trap Design and Color to Improve Grape Root Borer (Lepidoptera: Sesiidae) Monitoring. **Craig Roubos**, Oscar E. Liburd, Scott Weihman. . Dept. Of Entomology and Nematology, University of Florida, Bldg. 970 Natural Area Drive Gainesville FL 32611

3:34

18. Extracts of Romaine Lettuce Latex Deter Feeding of Banded Cucumber Beetle (Coleoptera: Chrysomelidae). **Amit Sethi**, Heather J. McAuslane, Hans T. Alborn, Russell T. Nagata, and Greg S. Nuessly. Department of Entomology and Nematology, University of Florida, P.O. Box 110620, Gainesville, Florida 32611.

4:48

19. *Thripinema fuscum* parasitism reduces both the feeding of *Frankliniella fusca* (Thysanoptera: Thripidae) on peanut and the transmission of *Tomato Spotted Wilt Virus*. **Kelly Sims**. Department of Entomology and Nematology, University of Florida, P.O. Box 110620, Gainesville, Florida 32611.

6:30 -- 8:30

Reception/Mixer -- Terrace

Exhibits -- Lobby

TUESDAY MORNING, July 25, 2006

7:00 -- 8:00

Past Presidents' Breakfast

Sinclair's

7:00 -- 5:00

Office

Bonito

8:00 -- 4:00

Registration

Gallery/Lobby

8:00 -- 5:00

Exhibitors, continued

Lobby

8:30 -- 12:00

SYMPOSIUM: Innovative Research in Industry

Organizer/Moderator: Scott Ferguson

Amberjack

8:30

Introduction -- Scott Ferguson, Syngenta Crop Protection, Vero Beach, FL

8:40

20. Innovation Under Pressure -- Injecting Insecticides into Trees for Insect Control. **David Cox**, Syngenta Crop Protection; D. Grosman, Texas Forest Service, Lufkin, TX; J.J. Daccola, Arborjet Inc., Winchester, MA.

9:05

21. Turf Insect Management, Acceptance of New Innovations in the Past and in the Present. **Doug Houseworth**, Arysta, 2777 Ocean Oaks Drive South, Fernandina Beach, FL 32034

9:30

22. Innovative IPM Preventive Practices for Tomato and Pepper. **Charlie Mellinger**, Glades Crop Care, Stuart, FL.

9:55

23. A Brief History of Leafminer Resistance Monitoring: From Bioassays to Molecular. **Scott Ferguson** & Omaira Pineda, Syngenta Crop Protection, Vero Beach, FL.

10:30 -- 10:45

Break

10:45

24. Transmission of non-repellant liquid termiticide among subterranean termites. **Jim Ballard**, FMC, Princeton, NJ.

11:10

25. OBERON®: a new resistance management tool for whitefly control in vegetables. **Marco Toapanta**, Bayer CropScience, Tampa, FL; David Schuster, GCREC, University of Florida; Roberto Cordero, GCREC-University of Florida; Lamar Buckelew, Bayer CropScience, Research Triangle Park, NC and Robert Steffens, Bayer CropScience, Research Triangle Park, NC

11:35

26. MaxForce TMS®: Cooperative Development of a Nontraditional Product. **John Paige**, Bayer Crop Science, Vero Beach, FL.

CONCURRENT SESSION: Student Paper Competition, Master of Science

Dan Hahn, Organizer

Dolphin

8:00

Introduction and Instructions

8:05

27. Evaluation of Pest Defense Tubes in the Wall System's insecticide delivery for control of cockroaches. **Barbara Bayer** and Dr. Philip Koehler. University of Florida, Department of Entomology and Nematology, Building 970, Natural Area Drive, Gainesville, FL 32611

8:19

28. Ecological interactions between an invasive bromeliad-eating weevil, *Metamasius callizona*, and two host bromeliads in south Florida, *Tillandsia fasciculata* and *T. utriculata*. **Teresa Cooper**. Department of Entomology and Nematology, University of Florida, Gainesville, FL 32611

8:33

29. Effect of Timed Releases of *Neoseiulus californicus* (McGregor) in Controlling the Twospotted Spider Mite in Strawberries. **Fraulo, A.B.** and O. E. Liburd. University of Florida, Department of Entomology and Nematology, Building 970, Natural Area Drive, Gainesville, FL 32611

8:47

30. Evaluation of Fipronil-Impregnated Cords for House Fly Control. **Hertz, Jeffrey C.** University of Florida, Urban Entomology Laboratory, Bldg. 970, Natural Area Drive, PO Box 110620, Gainesville, FL 32611-0620.

9:01

31. Biology and management of *Tomatus subtropicus* in St. Augustinegrass. **Kostromytska O.S.**, Buss E.A. University of Florida, Department of Entomology and Nematology, Building 970, Natural Area Drive, Gainesville, FL 32611.

9:15

32. How do Formosan subterranean termites create tunnel space? **Hou-Feng Li** and Nan-Yo Su. Department of Entomology and Nematology, University of Florida, Ft. Lauderdale Research & Education Center, University of Florida.

9:29

33. Effect of living and synthetic mulches with and without a reduced-risk insecticide for the control of whiteflies and aphids in cucurbit. **Teresia Nyoike** and Oscar Liburd. University of Florida, Department of Entomology and Nematology, Building 970, Natural Area Drive, Gainesville, FL 32611

10:30 -- 10:45

Break

POSTER SESSION, continued

10:00 AM -- 5:00 PM

Posters must be removed by 5:00 P.M. Tuesday

CONCURRENT SESSION

Contributed Papers, General Entomology

Rob Meagher, Moderator

Pompano

10:45

Introduction

10:50

34. History of Africanized Honey Bees (*Apis mellifera scutellata*) in Florida. **William H Kern, Jr.** and G. W. Hayes, Jr. Ft. Lauderdale research and Education Center, University of Florida, 3205 College Ave., Ft. Lauderdale, FL 33314.

11:00

35. Impact of Africanized Bees on the Pest Management Industry in Florida. **Philip G. Koehler.** Department of Entomology, University of Florida, Gainesville, FL 32611

11:10

36. Africanized Honey Bees (*Apis mellifera scutellata*) training for First -- Responders in Florida. **William H Kern, Jr.** Ft. Lauderdale research and Education Center, University of Florida, 3205 College Ave., Ft. Lauderdale, FL 33314.

11:20

37. Effect of Southern Chinch Bug on Weed Establishment in St. Augustinegrass
Ron Cherry, Curtis Rainbolt, and Russell Nagata. Everglades REC, University of
Florida, 3200 E. Palm Beach Road, Belle Glade, FL 33430

11:30

38. Greenbug Aphid Damage to Warm Season Turfgrasses. **Gregg Nuessly** and
Russell Nagata. Everglades Research and Education Center, UF/IFAS, 3200 E. Palm
Beach Rd., Belle Glade, FL 33430

11:40

39. The West Indies mahogany scale, *Conchaspis cordiae*, an unusual scale insect
recently found in Florida. **F. W. Howard** and Greg S. Hodges. Ft. Lauderdale REC,
Davie, FL.

11:50

40. Thrips Associated with Native Orchids in Northern Florida. **Joe Funderburk &**
Jyotsna Sharma. NFREC-University of Florida, 155 Research Road, Quincy, FL 32351

12:00 -- 2:30

TUESDAY, JULY 25, 2006

AWARDS LUNCHEON

Sailfish

2:30 -- 5:30

TUESDAY AFTERNOON, JULY 25, 2006

**WORKSHOP: Household Invaders Pest Identification, Bill Kern and Brian
Cabrera, Presenters**

Dolphin

2:30 -- 5:00

**SYMPOSIUM: Asian Citrus Psyllid and Citrus Greening Disease: A New
Challenge for the Florida Citrus Industry**

Michael Rogers, Organizer and Moderator

Amberjack

2:30

Introductory Remarks, Michael E. Rogers, UF-IFAS-CREC, Lake Alfred, FL

2:35

41. Citrus greening disease: Another new disease for Florida citrus. **Ronald H.
Brlansky**, UF-IFAS-CREC, Lake Alfred, FL.

2:55

42. Discovery and spread of Asian citrus psyllid and citrus greening. **Susan E.
Halbert**, DPI-FDACS, Gainesville, FL.

3:20 -- 3:35

Break

3:35

43. Asian citrus psyllid - biology and seasonal ecology. **David G. Hall**, USDA-ARS-USHRL, Ft. Pierce, FL.

3:55

44. Biological control of Asian citrus psyllid in Florida and Puerto Rico. **Philip A. Stansly**, UF-IFAS-SWFREC, Immokalee, FL, Richard Pluke, Urb. College Park, San Juan, Puerto Rico and Jawwad Qureshi, UF-IFAS-SWFREC, Immokalee, FL.

4:15

45. Management of the Asian Citrus Psyllid, *Diaphorina citri* (Homoptera: Psyllidae) on Orange Jasmine. **Catharine M. Mannion** and Jorge E. Pena. University of Florida, Tropical Research and Education Center, 18905 SW 280 St, Homestead, FL, 33031

4:35

46. Prospects for developing an IPM program to suppress Asian citrus psyllid populations and incidence of citrus greening disease. **Michael E. Rogers**, UF-IFAS-CREC, Lake Alfred, FL.

CONCURRENT SESSION, continued
Contributed Papers, General Entomology
R. Scheffrahn, Moderator
Pompano

2:30

Introduction

2:35

47. Global Relationships of *Bemisia tabaci* (Hemiptera: Aleyrodidae) revealed using Bayesian Analysis of mitochondrial COI DNA sequence. **Laura M. Boykin**, Robert G. Shatters, Jr., Rosemarie C. Rosell, Cindy L. McKenzie, Ruth Ann Bagnall, Paul De Barro, and Don R. Frohlich. USDA, ARS, Horticultural Research Laboratory, 2001 South Rock Road, Fort Pierce, FL 34945

2:45

48. Cytological attributes in eupyrene sperm bundles of F₁ sterile males: Relevance to the sterile insect technique (SIT) for Lepidopterans. **James E. Carpenter** and O.G. Marti, USDA-ARS, Crop Protection & Management Research Unit, P.O. Box 748, Tifton, GA 31793

2:55

49. Functionality of *JcDNV*-Derived Somatic Transformation Vectors in Insects and the Role of Viral Enhancer Sequences. **Paul D. Shirk**, Richard B. Furlong, Jennifer L. Gillett and Herve Bossin. USDA-ARS-CMAVE, 1700 23rd Drive, Gainesville, FL 32608

3:05

50. New transformation vectors for improved SIT and ecological safety in tephritid species. **A. M. Handler** and G. J. Zimowska. USDA-ARS-CMAVE, 1700 23rd Drive, Gainesville, FL 32608

3:20 -- 3:35

Break

3:35

51. Searching for Exotic *Spodoptera* Species. **Meagher, R. L.**, J. Brambila, & E. Hung. USDA-ARS, 1700 SW 23rd Dr., Gainesville, FL 32608.

3:45

52. Mass Rearing of *Cactoblastis cactorum*: An Evaluation of Mating and Egg Production in the Laboratory. **Colothdian D. Tate** and James E. Carpenter. USDA-ARS,CPMRU,P.O. Box 748, 2747 Davis Rd., Tifton, GA 31793-0748

3:55

53. *Amblyseius swirskii*; A revolutionary biological tool in the fight against whitefly and thrips. **René Ruiter**. Koppert Biological Systems in the US.

4:05

54. Some Strawberry Growers' Arguments Against Biological Control of Twospotted Spider Mite, *Tetranychus urticae* Koch . **James F. Price**. UF IFAS Gulf Coast Research and Education Center, 14625 CR 672, Wimauma, FL 33598_

4:15

55. Effects of Nutrients from Moth Eggs on Fecundity of the Predator *Orius insidiosus*. **Shapiro, Jeffrey P.** and Ferkovich, Stephen M. USDA, ARS, 1700 SW 23rd Drive, Gainesville, FL 32608

4:25

56. Brazilian Peppertree Leaflet Gallling Psyllid *Calophya terebinthifollii* (Hemiptera: Psyllidae): Field Host Range and Impact Studies. G. Barbieri, M.D. Vitorino, and **J.P. Cuda**. Department of Entomology & Nematology, University of Florida, PO Box 110620, Gainesville, FL 32611-0620

WEDNESDAY MORNING, July 26, 2006

8:00 -- 10:00

Registration

Contributed Papers, General Entomology
Geri Cashion, Moderator
Pompano

8:00

Introduction

8:05

57. Development of chilli thrips, *Scirtothrips dorsalis* Hood on selected crops. **D. R. Seal** and W. Klassen. Tropical Research and Education Center, 18905 SW 280 Street, Homestead, FL 33031

8:15

58. A comparative analysis of Mediterranean and Queensland fruit fly wing-buzzing sounds associated with mating. **Mankin, R. W.** and P. W. Taylor USDA-ARS, 1700 SW 23rd Dr., Gainesville, FL 32608

8:25

59. Influence of a Juvenile Hormone Analog and Dietary Protein on Male Caribbean Fruit Fly, *Anastrepha suspensa* (Diptera: Tephritidae), Sexual Behavior. **Rui Pereira**, John Sivinski and Peter Teal. Programa Madeira-Med, Biofábrica, Estrada Eng. Abel Vieira, 262 9135-260, Camacha, Portugal

8:35

60. Alverde® (Metaflumizone) A Novel New Insecticide for Control of Key Insect Pests in Vegetables. **Larry Newsom**, Venkat Pedibhotla, Joseph Mitchell, Thomas Holt. BASF Corp., 26 Davis Drive, P.O. Box 13528, Research Triangle Park, NC, 27709

8:45

61. Advion® Gel Baits: New Products for Cockroach Control. Clay Scherer & **Geri Cashion**. EcoSolutions, Inc. for Dupont Professional Products, Wilmington, DE.

8:55

62. Evaluation of quarterly replenishment of Recruit IV termite bait using testing protocols required by Florida Rule 5E-2.0311. **Ellen Thoms**, Joseph Eger, Matthew Messenger, Brian Cabrera, and Claudia Riegel. Dow AgroSciences

9:05

63. Treating Formosan Termite Infested Trees in New Orleans City Park. **Bruce Ryser**, Claudia Riegel & Barry Yokum. FMC Corporation, Specialty Products Business, 9703 Cypress Pond Av., Tampa, FL. 33647

9:15

64. Oslo Riverfront Conservation Area: the land surrounding the Florida Medical Entomology Laboratory. **George F. O'Meara**. Florida Medical Entomology Laboratory, IFAS, University of Florida, 200 9th Street, SE, Vero Beach, FL 32960

9:25

65. Common Myths About Lovebugs, Florida Folklore **N. C. Leppla** and J. P. Cuda.
UF/IFAS Statewide IPM Program P.O. Box 110630 Gainesville Florida 32611.

9:35

66. Management of *Diabrotica* spp in sweet potato. **Rick Story**, Abner Hammond,
and Jeff Murray, Louisiana State University AgCenter, Baton Rouge, LA

9:45

67. Access Curculionoidea: Using a Comprehensive Weevil Database to Evaluate
Evolutionary Trends **T. D. Northfield** and R. F. Mizell III, University of Florida,
NFREC, Quincy, FL