

**SOUTHWESTERN BRANCH**

**ENTOMOLOGICAL SOCIETY OF AMERICA**

**51<sup>ST</sup> ANNUAL MEETING**

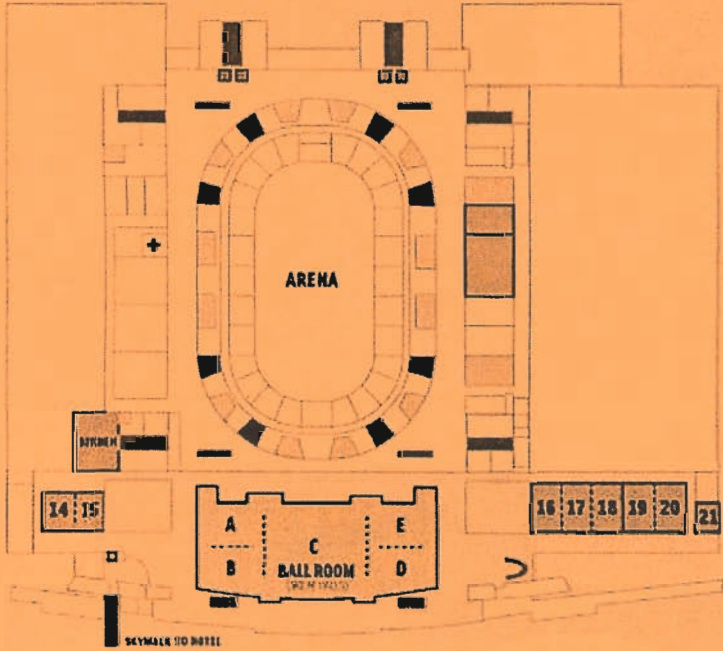
**FEBRUARY 22 – 27, 2003**



**RENAISSANCE HOTEL  
&  
COX CONVENTION CENTER**

**OKLAHOMA CITY, OK**

# COX CONVENTION CENTER



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COX CONVENTION CENTER MAP ....	Inside back cover

# PROGRAM SUMMARY

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## ***SATURDAY, FEBRUARY 22, 2003***

INSECT EXPO

LOCATION: Oklahoma City State Fairgrounds

TIME: 10:00 am – 5:00 pm

CONTACT: Scott Russell, Brownfield, TX 806-637-4060

## ***SUNDAY, FEBRUARY 23, 2003***

INSECT EXPO

LOCATION: Oklahoma City State Fairgrounds

TIME: 12 NOON – 5:00 pm

CONTACT: Scott Russell, Brownfield, TX 806-637-4060

## ***MONDAY, FEBRUARY 24, 2003***

- |                   |   |
|-------------------|---|
| 4:00 pm – 7:00 pm | Registration<br>Room: Kingkade – Hotel 2 <sup>nd</sup> floor                            |
| 2:00 pm – 3:30 pm | Southwestern Branch-ESA Executive Board<br>Room: Kingkade – Hotel 2 <sup>nd</sup> floor |
| 3:30 pm – 5:00 pm | Southwestern Entomological Society  |
| 3:30 pm – 4:00 pm | Executive Committee Meeting   |
| 4:00 pm – 5:00 pm | General Membership Business Meeting<br>Room: Kingkade – Hotel 2 <sup>nd</sup> floor     |
| 6:00 pm – 8:00 pm | Student Mixer<br>Room: Kingkade – Hotel 2 <sup>nd</sup> floor                           |

# PROGRAM SUMMARY

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## *TUESDAY, FEBRUARY 25, 2003*

7:00 am – 6:30 pm	Registration Room: Cox Center Foyer
9:00 am	Spouse Function: Room: Caffeina's / Hotel
8:00 am – 5:00 pm	Job opportunity room Room: Native American Room Cox Center
8:00 am – 5:00 pm	Presentations preview room Room: Native American Room Cox Center
8:00 am – 10:30 am	General Session Room: 14 & 15 - Cox Center
7:00 – 8:00 am	Student Competitions Poster set up: Room B – Cox Center
10:30 am – 5:00 pm	Student Competitions Poster viewing: Room B – Cox Center
1:30 – 3:40 pm	Student Competitions Papers: Room 14 & 15 – Cox Center
11:00 am – 4:30 pm	S-293, Southern Region IEG, Pecans, S-293 Meeting Room: Kingkade – Hotel 2 <sup>nd</sup> floor
5:00 – 7:00 pm	Linnaean Games Room: 14 & 15 – Cox Center
7:00 pm	Social and Special Recognition Awards Location: Bricktown Brewery

# PROGRAM SUMMARY

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## *WEDNESDAY, FEBRUARY 26, 2003*

7:00 am – 5:00 pm	Registration Room: Cox Center Foyer
8:00 am – 5:00 pm	Job opportunity Room: Native American Room – Cox Center.
8:00 am	Spouse Function: Room: Caffeina's / Hotel
7:00 am	General Session Submitted Posters set-up
8:00 am – 5:00 pm	Poster Viewing Room: B – Cox Center
8:00 am – 10:30 am	Session 1, Room 14: Symposium: Stored-Product Integrated Pest Management in the Southern Midwest
10:45 am – Noon	Session 2, Room 14: Submitted papers, Ecology, Behaviour and Biocontrol
8:00 am – 10:30 am	Session 3, Room 15: Symposium: New Developments in Management of Pecan Nut Casebearer
10:45 am – Noon	Session 4, Room 15: Submitted papers/ Crop Protection
1:30 am – 3:15 pm	Session 5, Room 14: Symposium : Functional Genomics: Emerging Technologies
3:30 pm – 5:00 pm	Session 6, Room 14: Submitted papers: Physiology, Toxicology, Systematics, Urban, Med/Vet
1:30 pm – 5:00 pm	Session 7, Room 15: Symposium 4: Regional Trends in Agriculture IPM Systems
5:00 – 7:00 pm	Linnaean Games Room 14 & 15 – Cox Center

# PROGRAM SUMMARY

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*THURSDAY, 27 FEBRUARY 2003*

8:00 am – Noon

Final Business meeting – SW Branch ESA  
Room: 14 & 15 – Cox Center

# GENERAL MEETING INFORMATION

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REGISTRATION: All persons attending the meetings or participating in the program must register. On-site registration fees include all meeting functions.

Active ESA members	\$80
Student ESA members	\$30
Youth members	\$10
Non-members	\$95
Spouse guest	\$20
Honorary/Emeritus	No charge, but we request that you register.

ESA CERTIFICATION BOARD INFORMATION: Information regarding the ESA Certification Board of the Entomological Society of America can be obtained at the Registration desk.

PROGRAM SCHEDULE AND MODERATORS: Speakers are limited to the time as indicated in the schedule and moderators have the responsibility and authority to enforce restricting time to that noted on the schedule. Moderators will sign in at the Presentation Preview room prior to the scheduled session and will receive timers and laser pointers.

SPONSORS: Thanks to all of our sponsors for their generous support of the student mixer, spouse functions, banquet and retiree functions.

AUDIOVISUAL: ONLY digital projectors with computers will be provided for oral presentations. Speakers must submit their presentations as Power Point files on CD or 3.5 inch disks to the Presentation Preview desk one day prior to the session at which they will present.

SPOUSE/GUEST HOSPITALITY: Spouse/guest function information will be available at the Registration Desk.

JOB OPPORTUNITY CENTER: The Student Affairs Committee of the SW-ESA Branch will operate a Jobs Opportunities Center during the meetings. Employers should provide copies of opportunities available which will be posted during the meeting. Potential employees/students should bring multiple copies of resumes which may be left at the Center during



the meeting. Volunteers operating the Center will serve as liaisons to arrange interviews schedules if needed.

**BANQUET:** The general mixer/social will be held at the Bricktown Brewery in Bricktown. The restaurant is within easy walking distance (two blocks) of the conference hotel.

**LOST AND FOUND:** Articles should be turned in to or reported to the Registration Desk or conference hotel main desk.

**MESSAGES:** A message board will be provided at the Registration Desk.

# OFFICERS AND COMMITTEES

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## *SOUTHWESTERN BRANCH ENTOMOLOGICAL SOCIETY OF AMERICA*

### 2002-2003 OFFICERS AND COMMITTEES

**TERRY MIZE, PRESIDENT**  
terry\_mize@fmc.com

**W. PAT MORRISON, PAST PRESIDENT**  
w-morrison1@tamu.edu

**JOHN BURD, PRESIDENT – ELECT**  
jdburd@pswcr1.ars.usda.gov

**PHILLIP MULDER, SECRETARY/TREASURER**  
philmul@okstate.edu

**BASTIAAN (BART) DREES, SECRETARY/TREASURER-ELECT**  
b-drees@tamu.edu

**FRANK GILSTRAP, ESA GOVERNING BOARD REPRESENTATIVE**  
f-gilstrap@tamu.edu

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Grant Kinzer  
Tom Fuchs

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Tom Sappington  
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Kevin Shufren  
Dave Thompson  
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Chris Sansone

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Horace Burke  
Don Peters

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Nathan Riggs  
David Kulhavey

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Richard Grantham  
Frank Gilstrap  
Marvin Harris  
Mark Muegge  
Harlan Thorvilson  
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Scott Russell  
Ann Weise

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Tom Royer, Co-chair

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Leonardo Camelo

Ana Palousek

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Robert Bowling

Roxanne Shufran

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Richard Grantham

Pete Teel

M.O. Way

Dave Richman

Phil Mulder

# MEETING PROGRAM

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## *MONDAY, FEBRUARY 24, 2003*

- 4:00 – 7:00 pm            Registration  
Room: Kingkade – Hotel 2<sup>nd</sup> floor
- 2:00 – 3:30 pm            Southwestern Branch - ESA Executive Board  
Room: Kingkade – Hotel 2<sup>nd</sup> floor
- 3:30 – 5:00 pm            Southwestern Entomological Society  
3:30 – 4:00 pm            Executive Committee Meeting  
4:00 – 5:00 pm            General Membership Business Meeting  
Room: Kingkade – Hotel 2<sup>nd</sup> floor
- 6:00 – 8:00 pm            Student Mixer  
Room: Kingkade – Hotel 2<sup>nd</sup> floor

## *TUESDAY, FEBRUARY 25, 2003*

- 8:00 am - Noon            GENERAL SESSION  
OPENING AND KEYNOTE ADDRESS  
ROOM 14 & 15, Cox Center
- 8:00 – 8:25                Open & Welcome, President Terry Mize
- 8:25 – 8:45                Oklahoma State University representative welcome
- 8:45 – 9:00                Opening Address, SW-Branch President Terry Mize
- 9:00 – 9:30                Keynote Address, ESA President Z.B. Mayo
- 9:30 – 9:40                ESA Governing Board report, Frank Gilstrap
- 9:40 – 9:50                ESA Foundation report, Frank Gilstrap
- 9:50 – 10:00              Honors and Presentations
- 10:00 – 10:10             Necrology report
- 10:10 – 10:20             Meeting Introductions, Jonathan Edelson  
Committee chairs and other workers

10:30

BREAK

SO – STUDENT COMPETITION ORAL PRESENTATIONS  
SP – STUDENT COMPETITION POSTER PRESENTATIONS  
SY – SYMPOSIUM PRESENTATION  
S – SUBMITTED ORAL PRESENTATION  
P – SUBMITTED POSTER PRESENTATION

10:30 - Noon           STUDENT POSTER COMPETITION VIEWING,  
Room B

1:30 to 3:40 pm       STUDENT ORAL PRESENTATION  
COMPETITION  
ROOM 14 & 15, Cox Center

SO1    1:30    EFFECT OF THE RED IMPORTED FIRE ANT ON  
ARTHROPODS AND KEY PREDATORS IN COTTON. **Rodrigo  
Diaz**, Department of Entomology, Texas A&M University HEEP  
Center; Allen Knutson, Department of Entomology, Texas A&M  
University, Research and Extension Center; Julio Bernal, Texas A&M  
University

SO2    1:40    DO *Beauveria bassiana* PELLETS CAUSE MORTALITY  
OF 4TH STAGE RIFA LARVAE. **Michael Schraeder**, Texas Tech  
University; Harlan Thorvilson, Texas Tech University

SO3    1:50    PRESENCE OF *Thelohania solenopsae* (MICROSPORIDA:  
THELOHANIIDAE) SPORES IN FIRE ANT SECRETIONS: IMPLI-  
CATIONS IN HORIZONTAL TRANSMISSION. **Johnny S. Chen**,  
Texas A&M University; Karen Snowden, Texas A&M University;  
Forrest Mitchell, Texas A&M University; S. Bradleigh Vinson, Texas  
A&M University

SO4    2:00    THE USE OF PLANT VOLATILES BY *Anaphes iole* AND  
EGG PARASITOID OF *Lygus hesperus*. **Veronica Manrique**, Texas  
A&M University; Walker A. Jones, USDA-ARS; Julio S. Bernal,  
Texas A&M University

SO5    2:10    IMPACT OF BOLL WEEVIL ERADICATION ON KEY  
PREDATORS AND PESTS IN CENTRAL TEXAS. **James Butler**,  
Texas A&M University; Allen Knutson, Texas A&M Research and  
Extension Center; Julio Bernal, Texas A&M University

SO6    2:20    HOST SUITABILITY OF VARIOUS STORED PRODUCT  
INSECTS FOR TWO STRAINS OF THE PARASITOID

*Anisopteromalus calandrae* (Hymenoptera: Pteromalidae). **Mukti N. Ghimire**, Oklahoma State University; Thomas W. Phillips, Oklahoma State University

- SO7 2:30 ALCOHOL VERSUS SUCROSE PREFERENCE IN HONEY BEES (*Apis mellifera* L.) FORAGING IN A CONTAINED ENVIRONMENT. **Audrey B. Sheridan**, Oklahoma State University; Phillip G. Mulder, Oklahoma State University; Charles I. Abramson, Oklahoma State University
- SO8 2:40 POLYMERASE CHAIN REACTION (PCR) FOR DETECTION AND IDENTIFICATION OF SMALL GRAIN APHID PARASITOID LARVAE. **Douglas B. Jones**, Oklahoma State University; Kristopher Giles, Oklahoma State University; Kevin A. Shufran, USDA/PSWCRL; Yi Chen, Alderson-Broadus College; Norman C. Elliott, USDA/PSWCRL
- SO9 2:50 WHEAT PROTEIN EXPRESSION IN RESPONSE TO APHID ATTACK. **Bryna E. Donnelly**, Oklahoma State University; Robin D. Madden, Oklahoma State University; David R. Porter, USDA-ARS; Jack W. Dillwith, Oklahoma State University
- SO10 3:00 THE POTENTIAL OF *Diglyphus isaea* AND *Opius dissitus* FOR AUGMENTATIVE BIOLOGICAL CONTROL OF *Liriomyza huidobrensis*. **Amy Bader**, Texas A&M University; Kevin Heinz, Texas A&M University; R.A. Wharton, Texas A&M University
- SO11 3:10 INSECTS, INQUIRY, AND ENTOMOLOGY. **Lisa Brooks**, Texas A&M University
- SO12 3:20 FECUNDITY AND LONGEVITY OF GREENBUG, *Schizaphis graminum*, AFFECTED BY BIOTYPE AND TEMPERATURE. **Anastasia L. Palousek**, West Texas A&M University; Bonnie B. Pendleton, West Texas A&M University; Bobby A. Stewart, West Texas A&M University; G.J. Michels, Jr., Texas Agricultural Experiment Station; Charles M. Rush, Texas Agricultural Experiment Station
- SO13 3:30 A COMPARISON OF A SQUASH TRAP AND AT-PLANT FURADAN® APPLICATION FOR SQUASH BUG AND CUCUMBER BEETLE MANAGEMENT IN WATERMELON. **Mahmut Dogramaci**, Oklahoma State University; J.V. Edelson and J. Shrefler, OSU

3:40 BREAK



- SP4 NO ADVERSE AFFECT OF COLEOPTERAN-SPECIFIC CRY3BB1 TOXIN FROM TRANSGENIC CORN POLLEN ON *Coleomegilla maculata* (DEGEER). **Aqeel Ahmad**, Kansas State University; Gerald Wilde, Kansas State University
- SP5 EFFECTS OF DIFFERENT TILLAGE SYSTEMS ON BOLL WEEVIL MORTALITY IN DRYLAND COTTON. **Greenberg, S.M.**, Kdela G SARC, ARS-USDA; Bradford, J.M., Kdela G SARC, ARS-USDA; Norman, J.W., Texas Agricultural Research and Extension Center
- SP6 EFFECTS OF LANDSCAPE VARIABLES AND CULTURAL PRACTICES ON GENERALIST PREDATORS IN COTTON. **Jarrad Prasifka**, Department of Entomology, Texas A&M University; Kevin M. Heinz, Department of Entomology, Texas A&M University; Richard R. Minzenmayer, Texas Cooperative Extension
- SP7 GREENBUG FITNESS ON SORGHUM AND NON-CULTIVATED HOSTS. **Kishan R. Sambarju**, West Texas A&M University; Bonnie B. Pendleton, West Texas A&M University; Clay A. Robinson, West Texas A&M University; Ronald C. Thomason, West Texas A&M University; Mark D. Lazar, Texas Agricultural Experiment Station
- SP8 EFFECT OF DIFFERENT AMOUNTS OF SOIL WATER AND NITROGEN ON GREENBUG FECUNDITY AND LONGEVITY ON SORGHUM. **Suresh Veerabomma**, West Texas A&M University; Bonnie B. Pendleton, West Texas A&M University; Bob A. Stewart, West Texas A&M University; Clay A. Robinson, West Texas A&M University; G.J. Michels, Jr., Texas Agricultural Experiment Station
- SP9 INFLUENCE OF PHORID FLIES AND LOW HUMIDITY ON FORAGING STRATEGIES OF *Solenopsis* SPP. **Ricardo A. Ramirez II**, New Mexico State University; David C. Thompson, New Mexico State University
- SP10 EFFECTS OF TEMPERATURE, HOST PLANT AND WEEVIL STRAIN ON BIOLOGICAL CONTROL OF AQUATIC WEEDS (*Salvinia* spp.) USING *Cyrtobagous salviniae*. **Jeremiah Dye**, Texas A&M University; Kevin Heinz, Texas A&M University
- SP11 SURVEY OF THE TERMITES (ISOPTERA) OF OKLAHOMA. **Kenneth Brown**, Oklahoma State University; Brad Kard, Oklahoma

State University; Mike Doss, Oklahoma State University

- SP12 ARE FIRE ANTS AFFECTING SPIDERS IN PECAN ORCHARDS? **Alejandro Calixto**, Texas A&M University; Marvin K. Harris, Texas A&M University; Allen Knutson, Texas A&M University; Bill Ree, Texas A&M University; Allen Dean, Texas A&M University
- SP13 A BANDING TECHNIQUE FOR STUDYING SPIDERS ON PECAN CANOPIES. **Alejandro Calixto**, Texas A&M University; Bill Ree, Texas A&M University; Allen Dean, Texas A&M University; Marvin K. Harris, Texas A&M University; Allen Knutson, Texas A&M University; Lisa Brooks, Texas A&M University
- SP14 CHARACTERIZATION OF THE GRAPE INSECT PEST COMPLEX IN OKLAHOMA. **Mathew T. Stacey**, Oklahoma State University, Stillwater, Ok. 74078, Phillip G. Malder Oklahoma State University, Stillwater, Ok. 74078
- SP16 COMPARISON OF ARTHROPOD SAMPLING METHODS ON SALT CEDAR, COYOTE WILLOW, AND SCREWBEAN MESQUITE. **Howard Beuhler**, New Mexico State University; David Thompson, New Mexico State University
- SP17 COMPOSITION OF PREDATOR POPULATIONS IN SALT CEDAR FIELD PLOTS. **Paul Smith**, New Mexico State University; Dave Thompson, New Mexico State University
- SP18 PHYSICAL AND SECONDARY CHEMICAL DIFFERENCES BETWEEN ROOT BORER-INFESTED AND UNINFESTED BROOM SNAKEWEED (*Gutierrezia sarothrae*). **Andrine Morrison**, New Mexico State University; Mary Lucero, USDA-JER, Marta Remmenga, New Mexico State University; David Richman, New Mexico State University
- SP19 SEASONAL ABUNDANCE OF STABLE FLIES (*Stomoxys calcitrans*) IN RELATION TO DIFFERENT IPM STRATEGIES IN TEXAS HIGH PLAINS. **Justin Talley**, West Texas A&M University; Greta Schuster, West Texas A&M University; Alberto Broce, Kansas State University
- SP20 RECOMBINANT EXPRESSION AND CHARACTERIZATION OF NECROTIC, A *Drosophila* SERPIN. **Zhen Zou**, Oklahoma State University; Haobo Jiang, Oklahoma State University

5:00 – 7:00 pm

LINNAEAN GAMES  
ROOMS 14 & 15, COX CENTER

## **WEDNESDAY, FEBRUARY 26, 2003**

- 8 am – 5 pm                      Submitted Poster Viewing, Room B.
- 8 – 11:30 am                      Session 1, Room 14.  
Symposium: Stored-Product Integrated Pest  
Management in the Southern Midwest  
Moderators: Tom Phillips and Terry Mize
- SY      8:00      Welcome and Opening Remarks, **Tom Phillips**, Oklahoma  
State University, Stillwater, OK
- SY1     8:05      POPULATION ESTIMATION AND DECISION SUPPORT  
SYSTEMS FOR STORED GRAIN IPM. **Paul Flinn**, USDA ARS  
Grain marketing, Production and Research Center, Manhattan, KS
- SY2     8:30      CHALLENGES AND PROSPECTS FOR IPM IN FOOD  
PROCESSING AND VALUE-ADDED FOOD OUTLETS. **Bhadriraju  
Subramanyam**, Dept. of Grain Science and Industry, Kansas State  
University, Manhattan, KS
- SY3     8:55      THE DYNAMIC TOOL BOX FOR CONTROLLING  
STORED-PRODUCT INSECTS. **Frank Arthur**, USDA ARS Grain  
marketing, Production and Research Center, Manhattan, KS
- SY4     9:20      EXTENSION PROGRAMS FOR STORED PRODUCT IPM:  
HISTORICAL PERSPECTIVES AND FUTURE NEEDS. **Roy  
Parker**, Texas Cooperative Extension, Corpus Christi, TX
- SY      9:45      Closing remarks and discussion. Tom Phillips and Terry Mize
- 10:30 – 10:45 am                      BREAK
- 10:45 - Noon                      Session 2, Room 14.  
Submitted papers: Ecology, Behavior and  
Biocontrol  
Moderator: Christian Nansen
- S1      10:30      OPTIMIZING THE USE OF PHEROMONE TRAPS FOR  
ACCURATE MAPPING OF THE INDIANMEAL MOTH, *Plodia  
interpunctella* (Lepidoptera: Pyralidae). **Philip K. Morton**, Oklahoma  
State University; Christian Nansen, Oklahoma State University
- S2      10:40      OVIPOSITIONAL STRATEGY OF THE INDIANMEAL  
MOTH, *Plodia interpunctella* (HUBNER) (Lepidoptera: Pyralidae).

**Christian Nansen**, Oklahoma State University; **William G. Meikle**, Oklahoma State University; **Thomas W. Phillips**, Oklahoma State University

- S3 10:50 NEGATIVE ATMOSPHERIC PRESSURE TO CONTROL POST HARVEST INSECTS. **Hulasare R.**, Oklahoma State University; **Phillips, T.W.**, Oklahoma State University
- S4 11:00 REPRODUCTIVE PATTERN OF FEMALE CORN EAR-WORMS OBTAINED FROM DIFFERENT SOURCES. **Juan D. Lopez, Jr.**, USDA-ARS, SPARC
- S5 11:10 SURVEY OF PARASITOIDS OF THE COTTON FLEA-HOPPER IN CENTRAL TEXAS. **Manuel Campos**, Texas A&M University; **Allen Knutson**, Texas A&M University
- S6 11:20 THE WASP HOUND: DISITNGUISHING AFLATOXIN-PRODUCING FUNGI WITH THE PARASITOID WASP *Microplitis croceipes* (Hermenoptera : Braconidae). **Jeffery K. Tomberlin**, Texas A&M University; **Moukaram Tertuliano**, University of Georgia, **Glen Rains**, University of Georgia, **W. Joe Lewis**, USDA-ARS
- S6.1 11:30 CHEMICAL CONTROL OF STORED-PRODUCT PESTS AND STATUS OF INSECTICIDE RESISTANCE IN MEXICAN POPULATIONS. **Joel Perez-Mendoza**, USDA ARS Grain Marketing Production and Research Center

12 Noon – 1:30 pm LUNCH BREAK

8:00 – 11:30 am Session 3, Room 15.

8:00 – 10:30 am Symposium 2: New Developments in Management of Pecan Nut Casebearer in Pecan  
Moderator – **Michael J. Hall**, Louisiana Agricultural Center, Pecan Research & Extension Station, Shreveport, LA

SY 8:00 **Michael Hall** – Introduction

SY5 8:10 DEVELOPMENT AND DELIVERY OF DECISION MAKING TOOLS FOR PECAN NUT CASEBEARER MANAGEMENT. **Harris, M.**, **W. Ree**, **D. Stevenson**, **A. Knutson** and **J. Jackman**, Texas A&M University, Dept. of Entomology, College Station, TX.

SY6 8:30 PECAN NUT CASEBEARER POPULATIONS IN NATIVE

PECAN AGROECOSYSTEMS. **Reid, W.** Pecan Experiment Field.  
Kansas State University & University of Missouri.

- SY7 8:50 CHEMICAL AND BIORATIONAL APPROACHES TO  
MANAGEMENT OF PECAN NUT CASEBEARER. **Mulder, P.G.**,  
J. McVay and M.J. Hall. Oklahoma State University; Auburn Univer-  
sity, and Louisiana State University, respectively.
- SY8 9:10 MATING DISRUPTION OF PECAN NUT CASEBEARER:  
FIELD TRIAL RESULTS. **Knutson, A.E.** and M. Muegge. Texas  
A&M University.
- SY9 9:30 INTEGRATED BIOLOGICAL CONTROL OF PECAN NUT  
CASEBEARER IN NEW MEXICO. **Ellington, J.** and R. Creamer.  
New Mexico State University.
- SY10 9:50 ECONOMIC IMPACT OF NUT FEEDING INSECTS  
BETWEEN FRUIT SET AND SHELL-HARDENING IN PECAN .  
**Dutcher, J.D.** and W. Hudson. University of Georgia, Coastal Plain  
Experiment Station.
- SY11 10:10 A PRODUCER/COUNTY EXTENSION AGENT MONI-  
TORING PROGRAM FOR THE PECAN NUT CASEBEARER,  
*Acrobasis nuxvorella* NEUNZIG. **Ree, W.**, S. Forest, J. Janak and A  
Netardus. Texas Cooperative Extension; Bryan, Hallettsville, Victoria,  
and Dewitt, TX, respectively.
- 10:30 – 10:45 am BREAK
- 10:45 - Noon Session 4, Room 15.  
Submitted papers, Crop Protection  
Moderator: **Tom Fuchs**
- S8 10:45 SOUTHWESTERN CORN BORER CONTROL WITH NEW  
INSECTICIDES. **Greg Cronholm**, Texas A&M University
- S9 10:55 CLOTHIADIN SEED—A NEW SEED TREATMENT  
UNDER DEVELOPMENT ON CORN. **J.Terry Pitts**, Gustafson  
LLC, Plano, TX, Bill Hairston, Gustafson LLC, Plano, TX
- S10 11:05 EFFECT OF DISTANCE INTO FIELD ON EFFICIENCY  
OF TRECEâ CORN ROOTWORM TRAPS. **Gerald Wilde**, Kansas  
State University; Jasdeep Singh, Washington State University
- S11 11:15 BIOLOGY AND ECOLOGY OF *Crepntiades* sp., A MIRID

PEST OF COTTON IN SOUTH TEXAS. **Randy J. Coleman**, USDA-ARS, Walker A. Jones, USDA-ARS

S12 11:25 LORSBAN EFFECTS ON NON-TARGET PESTS AND BENEFICIALS: IMPLICATIONS FOR PINK BOLLWORM ERADICATION IN NEW MEXICO. **C. Scott Bundy**, New Mexico State University; Brad Lewis, New Mexico State University

S13 11:35 PRIORITIZING PEST MANAGEMENT ALTERNATIVES FOR SMALL ACREAGE CROPS. **Rodney L. Holloway**, Texas A&M University; Noel Troxclair, Texas A&M University

S14 11:45 TOWARDS DETECTING GREENBUG INFESTATIONS USING REMOTE SENSING. **N.C. Elliott**, USDA-ARS, M.Rao, Oklahoma State University; Z. Yang, Oklahoma State University; D. Kindler, USDA-ARS, K. Giles, Oklahoma State University

12 Noon – 1:30 pm LUNCH BREAK

1:30 – 5:00 pm Session 5, Room 14

1:30 – 3:30 pm Symposium 3: Functional Genomics: Emerging Technologies: Powerful New Tools for the Contemporary Entomologist  
Coordinator: **Jack W. Dillwith**, Dept. of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK.

SY 1:30 Introduction. **Jack W. Dillwith**

SY12 1:35 TRANSCRIPT PROFILING. **Arron C. Guenzi** and Yan Zhang, Dept. of Plant and Soil Sciences, Oklahoma State, University, Stillwater, OK and Forage Biotechnology, Samuel Roberts Noble Foundation, Ardmore, OK.

SY13 1:55 PROTEOMICS. **Bryna E. Donnelly**, Robin D. Madden and Jack W. Dillwith, Dept. of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK.

SY14 2:15 METABOLOMICS. **Lloyd W. Sumner**, David Huhman, Anthony Duran, and Cory Broeckling, Analytical Chemistry and Mass Spectrometry, Samuel Roberts Noble Foundation, Ardmore, OK.

SY15 2:35 RNA SILENCING: A TOOL FOR PARASITE/HOST INTERACTOME STUDIES. **Majd N. Aljamali**, Richard C. Essenberg

and John R. Sauer, Dept. of Biochemistry and Molecular Biology and Dept. of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK.

SY 2:55 Discussion. **Jack Dillwith.**

3:15 – 3:30 pm BREAK

3:30 – 5:00 pm Session 6, Room 14.  
Submitted papers: Physiology, Toxicology,  
Systematics, Urban, Medical/Veterinary Entomology  
Moderator: **Bryna E. Donnelly**

S14 3:30 CHARACTERIZATION OF THE MAJOR SALIVARY  
PROTEIN IN *Amblyomma americanum*: RELATIONSHIP TO MAJOR  
HEMOLYMPH PROTEIN. **Jack W. Dillwith**, Oklahoma State  
University; Robin D. Madden, Oklahoma State University

S15 3:40 DEVELOPMENT OF A CHEMICAL ATTRACTANT  
TRAPPING SYSTEM FOR STINGING WASPS OF THE SOUTH-  
WESTERN U.S. (*Hymenoptera: Vespidae*). **Hal C. Reed**, Oral Roberts  
University; Peter Landolt, USDA/ARS

S16 3:50 FAST GREEN, A NONPERSISTENT MARKER DYE FOR  
FIELD STUDIES OF SUBTERRANEAN TERMITES, *Reticulitermes*  
spp. (Isoptera: Rhinotermitidae). **Thomas H. Atkinson**, Dow  
AgroSciences

S17 4:00 POPULATION DYNAMICS OF *Boophilus annulatus* ON  
PASTURED CATTLE IN SOUTH TEXAS. **Robert J. Miller**, Cattle  
Fever Tick Research Laboratory; Ronald B. Davey, Cattle Fever Tick  
Research Laboratory; John E. George, Knipling Bushland US Livestock  
Research Laboratory

S18 4:10 BIOLOGY OF *Triatoma rubida sonoriana* (HEMIPTERA:  
REDUVIDAE) UNDER LABORATORY CONDITIONS. **Edgar  
Paredes Gonzalez**, Universidad de Guadalajara; Jose alejandro  
Martinez-Ibarra. Universidad de Guadalajara; Benjamin Noguera  
Torres, Escuela Nacional de Ciencias Biologicas

S19 4:20 FIELD PERFORMANCE OF VIP COTTON AGAINST  
LEPIDOPTERAN COTTON PESTS IN THE U.S. Brad Vinton,  
Syngenta Crop Protection and Frank Shotkoski, Syngenta Biotechnol-  
ogy Inc.

- 1:30pm – 5 pm            Session 7, Room 15
- 1:30 – 3:30 pm            Symposium 4: Regional Trends in Agriculture IPM Systems  
 Coordinators: **Carlos E. Bográn**, Texas Cooperative Extension, **Kristopher L. Giles**, Oklahoma State University.
- SY16    1:30 IPM PLANS FOR FLORICULTURE AND NURSERY. **Carlos Bográn**, Texas A&M University
- SY17    1:50 TEXAS IPM PLANS: A CASE STUDY WITH HIBISCUS. **Scott Ludwig**, Texas A&M University
- SY18    2:10 OPPORTUNITIES FOR HOST PLANT RESISTANCE IN ORNAMENTAL IPM SYSTEMS. **Jim Reinert**, Texas A&M University
- SY19    2:30 PRESENCE/ABSENCE SAMPLING PLANS FOR APHIDS AND PARASITOIDS IN WINTER WHEAT. **Kris Giles**, Oklahoma State University
- SY20    2:50 THE GREENBUG PEST MANAGEMENT DECISION SUPPORT SYSTEM. **Tom Royer**, Oklahoma State University
- 3:15 - 3:30            BREAK
- SY21    3:30 COTTON ARTHROPOD RESEARCH DIRECTIONS AFTER BOLL WEEVIL ERADICATION. **Megha Parajulee**, Texas A&M University
- SY22    3:50 COTTON IPM IMPLEMENTATION AFTER BOLL WEEVIL ERADICATION. **Chris Sansone**, Texas A&M University
- SY       4:10 Discussion
- 8:00 am – 5:00 pm        Submitted Poster Session, Room B, Cox Center
- P1        DEVELOPMENT OF PRAGMATIC SAMPLING PLAN FOR BENEFICIAL ARTHROPODS IN COTTON. **Allen Knutson**, Texas Cooperative Extension, Texas A&M University System, District IV Extension and Research Center, **Mark Muegge**, Texas Cooperative Extension, Texas A&M University System, District VI Extension and Research Center, **Lloyd T. Wilson**, Texas A&M University System, Agricultural Research & Extension Center



- P2 NONCOTTON HOST SOURCE OF *Lygus* BUGS IN THE TEXAS HIGH PLAINS. **M.N. Parajulee**, Texas Agricultural Research and Extension Center, M.D. Arnold, Texas Agricultural Research and Extension Center, S.C. Carroll, Texas Agricultural Research and Extension Center, A.M. Cranmer, Texas Agricultural Research and Extension Center, R.B. Shrestha, Texas Agricultural Research and Extension Center, P.L. Bommireddy, Texas Agricultural Research and Extension Center
- P3 STATUS OF RUSSIAN WHEAT APHID-RESISTANT FEED BARLEY FOR DRYLAND WESTERN US. **D.W. Mornhinweg**, USDA-ARS, P.P. Bregitzer, USDA-ARS, F.B. Peairs, Colorado State University; T.A. Randolph, Colorado State University; M. Koch, Colorado State University
- P4 INFLUENCE OF PIGWEED ON BEET ARMYWORM ACTIVITY IN COTTON. **S.C. Carroll**, Texas Agricultural Research and Extension Center, M.N. Parajulee, Texas Agricultural Research and Extension Center, R.B. Shrestha, Texas Agricultural Research and Extension Center, M.D. Arnold, Texas Agricultural Research and Extension Center
- P5 INFLUENCE OF PLANTING DATE AND CULTIVAR ON COTTON ARTHROPOD PREDATORS. **R.B. Shrestha**, Texas Agricultural Research and Extension Center, M.N. Parajulee, Texas Agricultural Research and Extension Center, A.M. Cranmer, Texas Agricultural Research and Extension Center
- P6 RESPONSE OF BANKS GRASS MITE POPULATIONS TO BIFENTHRIN AND DIMETHOATE. **Roxanne Shufra**n, Texas Agricultural Experiment Station, Robert Bowling, Texas Cooperative Extension, Bonnie Pendleton, West Texas A&M, Pat Porter, Texas Cooperative Extension, Greg Cronholm, Texas Cooperative Extension, Carl Patrick, Texas Cooperative Extension, Brad Lewis, New Mexico State University
- P7 *Lygus hesperus*, AN EXPERIMENTAL VECTOR OF *Serratia marcescens*, THE CAUSAL AGENT OF CUCURBIT YELLOW VINE DISEASE. **A.C. Wayadande**, Oklahoma State University; T. Al-Zadjali, Oklahoma State University; J. Fletcher, Oklahoma State University; B. Bruton, USDA-ARS, S. Pair, USDA-ARS, F. Mitchell, Texas A&M University
- P8 EVALUATING TECHNIQUES FOR DETECTING SOYBEAN STEM BORER AND MONITORING ADULT EMERGENCE IN

- SUNFLOWER. **Robert Bowling**, Texas Cooperative Extension, Bonnie Pendleton, Texas A&M University; Carl Patrick, Texas Cooperative Extension
- P9 EFFECTS OF RICE ROOT APHID ON FORAGE OAT GRAIN YIELDS OF WHEAT. **Dean Kindler**, USDA-ARS, Louis Hesler, USDA-ARS, Norman Elliot, USDA-ARS, Tom Royer, Oklahoma State University
- P10 PHOSPHINE EFFICACY FOR THE RUSTY GRAIN BEETLE, *Cryptolestes ferrugineus* (COLEOPTERA; CUCUJIDAE): INFLUENCE OF TEMPERATURE, EXPOSURE TIME AND LIFE STAGE. **Charles Konemann**, Oklahoma State University; Thomas Phillips, Oklahoma State University; Paul Flinn, USDA-ARS GMPC
- P11 SPINOSAD: LABORATORY AND FIELD EVALUATIONS ON A POTENTIAL GRAIN PROTECTANT FOR STORED WHEAT. **Edmond L. Bonjour**, Oklahoma State University; Thomas W. Phillips, Oklahoma State University; Terry Pitts, Gustafson LLC
- P12 MEASURING PEST MANAGEMENT. **Rodney Holloway**, Texas A&M University; Dudley Smith, Texas A&M University
- P13 ANABIOSIS OF INFORMATION DELIVERY: RECUSANT QUADRAGENARIANS AND IT TOOLS THAT REALLY WORK. **Patrick Porter**, Texas Cooperative Extension, Mike Blanton, Texas Agricultural Extension Station
- P14 WITHIN-PLANT SPATIAL PATTERNS AND PREFERRED FEEDING SITES OF *Aphis craccivora* KOCH (Homoptera: Aphididae) ON ALFALFA. **Ali A. Zarrabi**, Oklahoma State University; Richard C. Berberet, Oklahoma State University; Mark E. Payton, Oklahoma State University
- P15 EFFECTS OF THREE NEEM-BASED INSECTICIDES ON DIAMONDBACK MOTH (Lepidoptera: Plutellidae). **Tong-Xian Liu**, Texas A&M University AES, Ge-Mei Liang, Texas A&M University AES
- P16 CHEMICAL COTTON STALK TERMINATION IN THE LOWER RIO GRANDE VALLEY. **John W. Norman**, Texas Cooperative Extension Center, Charles Stichler, USDA-ARS, Sasha Greenberg, Texas Cooperative Extension Center
- P17 DEVELOPMENT OF A DIETARY ASSAY FOR SOUTHERN CORN

- ROOTWORM RESISTANCE TO PEANUT. **J.S. Armstrong**, Texas Tech University and Texas A&M University Experimentation Station, L. Camelo, Texas Tech University and Texas A&M University Experimentation Station, K.Z. Salzman, Texas A&M University; F.L. Mitchell, Texas A&M University
- P18 CUCURBIT YELLOW VINE DISEASE BACTERIUM IS RETAINED IN OVERWINTERING SQUASH BUG. **S.D. Pair**, USDA-ARS, SCARL, B.D. Bruton, USDA-ARS, SCARL, F. Mitchell, Texas Agricultural Experiment Station, J. Fletcher, Oklahoma State University; A. Wayadande, Oklahoma State University
- P19 EFFECTS OF ROUTINE LATE SEASON FIELD OPERATIONS ON NUMBERS OF BOLL WEEVILS CAPTURED IN LARGE CAPACITY PHEROMONE TRAPS. **Allan T. Showler**, USDA-ARS SARC
- P20 INFLUENCE OF MEXICAN FREE-TAILED BATS ON FLIGHT AND OVIPOSITION OF BOLLWORM MOTHS. **John K. Westbrook**, USDA-ARS, Gary F. McCracken, University of Tennessee, Paul G. Schleider, USDA-ARS, Erin Gillam, University of Tennessee, Monika Rhodes, Griffith University
- P21 PREPLANT TILLAGE IMPACTS CEREAL-APHID INFESTATIONS IN SPRING SMALL GRAINS. **Louis Hesler**, USDA-ARS-NGIRL, Robert K. Berg, Southeast Dakota Research Farm
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- P23 ATTRACTANTS FOR SCARABAEID ADULTS. **Robert L. Crocker**, Texas A&M University; Juan D. Lopez, USDA/ARS, Michael G. Klein, Maricela Garcia-Bonilla, Texas A&M University
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- COLD TEMPERATURE TOLERANCE. **K.A. Shufan**, USDA-ARS, A.A. Weathersbee III, USDA-ARS, D.B. Jones, Oklahoma State University; N.C. Elliott, USDA-ARS
- P27 EFFECTS OF GREENBUG INFESTATIONS ON WINTER WHEAT FORAGE. **Dennis Kastl**, Oklahoma State University; Kris Giles, Oklahoma State University; Emed Ismail, Oklahoma State University; Tom Royer, Oklahoma State University; Norm Elliott, Oklahoma State University; Clint Krebiel, Oklahoma State University
- P28 IDENTIFICATION AND SEQUENCE OF cDNA GENES ENCODING ACETYLCHOLINESTERASE FROM HORN FLIES (*Huematobia irritans*) AND STABLE FLIES (*Stomoxys calcitrans*). **Kevin B. Temeyer**, USDA-ARS
- P29 DOCUMENTING BIODIVERSITY IN NEW MEXICO: A COOPERATIVE EFFORT. **David B. Richman**, New Mexico State University; Carol A. Sutherland, New Mexico State University; Andrine A. Morrison, New Mexico State University
- P30 THE CENTER FOR NATURAL HISTORY COLLECTIONS (CNHC) AND ARTHROPOD BIODIVERSITY AT NEW MEXICO STATE UNIVERSITY. **David Richman**, New Mexico State University; Carol A. Sutherland, New Mexico State University; Andrine A. Morrison, New Mexico State University
- P31 CASN EDUCATION FACILITY FOR URBAN INSECT PEST CONTROL. **Kevin T. Shelton**, Oklahoma State University; Jim T. Criswell, Oklahoma State University; and Bradford M. Kard, Oklahoma State University
- P32 THE USE OF AN ENID, OKLAHOMA HOUSING ADDITION FOR MANAGING ENVIRONMENTALLY—SENSITIVE LANDSCAPES: A MODEL SYSTEM FOR IPM EDUCATION. **Patricia C. Bolin**, Oklahoma State University; Michael A. Schnelle, Oklahoma State University
- P33 THE PREDATION OF BLACK CUTWORM LARVAE *Agrotis ipsilon* BY THIEF ANTS *Solenopsis molesta* IN A TURFGRASS ECOSYSTEM. **Tom A. Royer**, Oklahoma State University; Nathan R. Walker, Oklahoma State University
- P34 INSECTS IN THE NEWS: INSECTS THAT STIRRED EMOTIONS AMONG NORTHWESTERN TEXAS PANHANDLE COUNTY RESIDENTS DURING 2002. **Robert Bowling**, Texas Cooperative

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Robert Harris, Texas Cooperative Extension

- P35 BIOLOGICAL CONTROL OF ALFALFA WEEVIL IN NEW MEXICO. **Jane Breen Pierce**, New Mexico State Univ., P.E. Yates, NMSU, A.L. Richardson, NMSU, C. Sutherland, NMSU, J.J. Ellington, NMSU, C.S. Bundy, NMSU
- P36 Effect of Cotton-Mung Bean Intercropping on Seasonal Activity of Cotton Arthropods. **Feng Ge**, Institute of Zoology, Chinese Academy of Sciences and Megha N. Parajulee, Texas Agricultural Experiment Station
- P37 INFLUENCE OF CONSERVATION TILLAGE SYSTEM ON COTTON ARTHROPOD PREDATORS. **R.B. Shrestha**, Texas Agricultural Research and Extension Center, M.N. Parajulee, Texas Agricultural Research and Extension Center, A.M. Cramner, Texas Agricultural Research and Extension Center, P.L. Bommireddy, Texas Agricultural Research and Extension Center, S.C. Carroll, Texas Agricultural Research and Extension Center, M.D. Arnold, Texas Agricultural Research and Extension Center
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- P40 Texas IPM Internship Program. **Thomas W. Fuchs**, Texas Cooperative Extension Service; Greta Schuster and Scott Armstrong, Texas Cooperative Extension Service

5:00 – 7:00 pm

LINNAEAN GAMES  
ROOMS 14 & 15, COX CENTER

***THURSDAY, FEBRUARY 27, 2003***

8:00 am – NOON

FINAL BUSINESS MEETING  
Room 14 & 15, Cox Center

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Chm. Manning A. Price	1962-63
Chm. Sherman W. Clark	1961-62
Chm. O.H. Graham	1960-61
Chm. Clyde A. Bower	1959-60
Chm. Paul Gregg	1958-59
Chm. C.R. Parencia	1957-58
Chm. J.C. Gaines	1956-57
Chm. D.C. Earley	1955-56
Chm. John M. Landrum	1954-55
Chm. D.E. Howell	1953-54
Chm. P.J. Reno	1952-53
Chm. R.C. Bushland*	1951-52
Chm. H.G. Johnston*	1950-51

\* Southwestern Branch, American Association of Economic