



**54th ANNUAL MEETING  
of the  
SOUTHWESTERN BRANCH  
of the  
ENTOMOLOGICAL SOCIETY OF AMERICA**  
<http://swbesa.tamu.edu>  
and the  
**ANNUAL MEETING of the  
SOCIETY OF SOUTHWESTERN ENTOMOLOGISTS**

**ABSTRACTS**

**27 FEBRUARY – 2 MARCH 2006  
Omni Austin Hotel at Southpark  
4140 Governor's Row  
Austin, TX 78744  
(512)-383-2602; [www.omnihotels.com](http://www.omnihotels.com)**

**Abstracts Submitted for the 54<sup>th</sup> Annual Meeting of the Southwestern Branch of the Entomological Society of America, and the Annual Meeting of the Society of Southwestern Entomologists**

27 February – 2 March 2006, Omni Austin Hotel at Southpark, 4140 Governor’s Row, Austin, Texas

Table of Contents

STUDENT ORAL PRESENTATIONS ..... 1  
STUDENT POSTERS ..... 7  
BIOLOGY/ECOLOGY/BEHAVIOR ORAL PRESENTATIONS ..... 14  
CROP PROTECTION ORAL PRESENTATIONS ..... 16  
PHYSIOLOGY/BIOCHEMISTRY/TOXICOLOGY/MOLECULAR ORAL PRESENTATIONS ..... 17  
URBAN ENTOMOLOGY ORAL PRESENTATIONS ..... 18  
MEDICAL/VETERINARY ENTOMOLOGY ORAL PRESENTATIONS ..... 18  
FIRE ANT SYMPOSIUM ..... 19  
SUBMITTED POSTERS ..... 19

Abbreviations Used:

SO = Student Oral Presentations  
O = Submitted Oral Presentations

SP = Student Poster  
P = Submitted Poster

**Student Oral Presentations**

**SO-01 Glene Mynhardt, Anthony Cognato and Marvin Harris, Texas A&M University.**

**Population genetics of the pecan weevil, *Curculio caryae* Horn, based on mitochondrial DNA data.**

The pecan weevil, *Curculio caryae* Horn, is an economically important pest that causes millions of dollars of damage to pecans and other hickory (*Carya* sp.) annually. Due to its pest status it is important to know the weevil's historical and potential distribution, rates of dispersal, and population structure across its range. Using the mitochondrial gene, COI, we performed a parsimony-based analysis to determine relationships among individuals within and among populations. Mitochondrial DNA analysis shows that there are at least three clades of pecan weevil that occur within its range. Nested clade analysis, which measures the concordance of genetic data and geography, shows some relationship between geography and haplotypes, but further analyses are necessary to confirm our results.

**SO-02 Beth Petersen and David Thompson, New Mexico State University.**

**Monitoring population dynamics in field cages between mixed populations of saltcedar leaf beetle ecotypes.**

Saltcedar (*Tamarix* spp.) is an invasive riparian shrub/tree in the western United States. *Diorhabda elongata* (Coleoptera: Chrysomelidae) feeds exclusively on saltcedar in Europe and Asia. Ecotypes

## Biology/Ecology/Behavior Oral Presentations

### BE-01 Ted Cottrell, USDA-ARS.

#### Predation by adult and larval lady beetles (Coleoptera: Coccinellidae) on initial contact with lady beetle eggs.

Naïve adults and larvae of the native lady beetles *Coleomegilla maculata* (DeGeer), *Cycloneda munda* (Say), *Hippodamia convergens* Guérin-Méneville, *Olla v-nigrum* (Mulsant) and the exotic lady beetle *Harmonia axyridis* (Pallas) (Coleoptera: Coccinellidae) were tested for their initial response to eggs of each of these five lady beetle species. Additionally, the response of field-collected *O. v-nigrum* and *H. axyridis* adults to eggs of those species was tested. *Coleomegilla maculata*, *H. axyridis* and *O. v-nigrum* adults responded similarly to all egg species on first contact. Higher numbers of *C. munda* adults did not eat *C. maculata*, *H. convergens* and *O. v-nigrum* eggs on first contact compared with *C. munda* and *H. axyridis* eggs. *Hippodamia convergens* adults always ate *C. munda* eggs but hardly ate *H. axyridis* eggs on first contact. Native adults only ate 6% of exotic but 59% of native eggs per cluster on first contact. Exotic adults ate 74 and 89% of native and exotic eggs per cluster, respectively, on first contact. The response of *C. maculata* larvae was similar across egg species whereas, a significant difference in response to egg species was detected for *C. munda*, *H. convergens*, *O. v-nigrum* and *H. axyridis*. Native larvae ate 68% of native but only 11% of exotic eggs per cluster on first contact. Exotic larvae ate 82 and 56% of native and exotic eggs per cluster, respectively, on first contact. Adult *O. v-nigrum*, field collected and immediately tested, responded differently to egg species on first contact with adults eating 8% of exotic and 58% of native eggs per cluster when they did feed on first contact. Field-collected *H. axyridis* adults responded similarly to all egg species on first contact. Only 20% of field-collected adult *H. axyridis* fed on egg clusters upon initial contact but those adults consumed 72 and 54% of native and exotic eggs per cluster, respectively.

### BE-02 Rizana Mahroof and Thomas Phillips, Oklahoma State University.

#### Behavioral response of the cigarette beetle, *Lasioderma serricorne* (Coleoptera: Anobiidae) to different host-derived volatiles.

With the aim of developing food odor-borne attractants to increase the effectiveness of trapping, a two-choice, pitfall, walking-bioassay was conducted to study the behavioral responses of adult cigarette beetle, *Lasioderma serricorne* (Coleoptera: Anobiidae), a pest of wide varieties of stored commodities, to volatiles of sixteen different host materials. Seven out of sixteen host materials that displayed significantly higher attractive responses were further studied for (1) respective responses to extracts with hexane, methylene chloride, or a combination of hexane and diethyl ether, and (2) the effect of sex of *L. serricorne* on responses to host-derived volatiles. Behavioral studies with extracts revealed that, responses of *L. serricorne* in two-choice bioassay varied among the type of extract. Volatiles from different peppers extracted by any type of solvent attracted significantly more adult beetles. For tobacco, an extract made with a combination of hexane and diethyl ether was more attractive to adult beetles than hexane or methylene chloride extracts. When virgin males, virgin females and mated females were bioassayed, mated females responded relatively more to host-derived volatiles. Adults of *L. serricorne* are suspected to be non-feeding, or to feed very little, so these differences in responses suggest that gravid females actively seek suitable hosts for oviposition. This study provides the basis for developing effective traps, if food odor-borne attractants can be used alone or combined with existing *L. serricorne* sex pheromone.