



Pacific Branch
Entomological
Society of America

Eighty-Fourth
Annual Meeting



Timothy D. Paine
President

DoubleTree Hotel
Costa Mesa, California

June 25-27, 2000

**JOHN HENRY COMSTOCK GRADUATE STUDENT
AWARD**

This year's winner of the Comstock Award for the Pacific Branch of the ESA is Dr. Alec Gerry. Dr. Gerry is currently a senior public health biologist at the Vector-borne Disease Section of the California Dept. of Public Health in Visalia, CA.

Dr. Gerry received his Ph.D. from the University of California, Riverside in 1999 with a major in medical/veterinary entomology and minors in insect biochemistry and biomedical sciences.



WOODWORTH AWARD

The C. W. Woodworth Award annually recognizes a person in the Pacific Branch of the ESA who has made outstanding contributions to entomology during the past decade. The 2000 Award goes to Dr. Jay Brunner of Washington State University.



Dr. Brunner majored in biology at Willamette University (1969), then went on to obtain a Master of Science degree in entomology at Washington State University (1973). He continued his graduate studies at WSU, obtaining a doctorate in entomology in 1975. His first post-graduate position was with Michigan State University where he served as the director of Michigan's pilot Tree Fruit IPM Project. After four years, he joined the faculty at Washington State University, located at the Tree Fruit Research and Extension Center in Wenatchee. His work is most noted for implementation of phenology models, especially those for codling moth and other tortricid pests. More recently, his work has focused on the development and implementation of mating disruption of codling moth. In 1997, he was appointed Director of the TFREC.

Dr. Brunner's career has been distinguished by numerous types of awards, service, and recognition. He served as the President of the Pacific Branch in 1998-99, and as secretary of Section F in 1997. He received the Pacific Branch ESA Award for Excellence in IPM in 1997.

**PACIFIC BRANCH
ENTOMOLOGICAL SOCIETY OF AMERICA
COMMITTEE MEMBERSHIP AND OTHER
APPOINTMENTS
1999-2000**

Abstracts

Phyllis Crabtree

Archives

Bruce F. Eldridge

Arrangements

William Carson
Gregory Kund

Auditing

Tom Unruh

Awards Canvassing

Dessie L. A. Underwood

Graduate Student

Carlos E. Coviella

Linnaean Games

Darcy Reed, Chairman & Games Master

Nominations

Robert A. van Steenwyk, Chairman
Kris Godfrey
Michael Brewer

Program

Eileen Paine
Phyllis Crabtree
Timothy D. Paine

Registration

Darcy Reed
Andrea Joyce
Heather Yaffee

Resolutions

Larry Godfrey

Site Selection

Michael Wagner
Timothy Dennehey

Student Paper Competition

Gregory P. Walker
Raymond K. Yokomi
Margaret Wirth
Vincent P. Jones

Sustaining Associates

Jay Brunner
Kurt Volker

Pacific Branch

**ENTOMOLOGICAL
SOCIETY OF AMERICA**

President

Timothy D. Paine
Department of Entomology
University of California
Riverside, CA 92521

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Washington State University
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Prosser, WA 99350

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Yakima, WA 98908

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Richard A. Redak
Department of Entomology
University of California
Riverside, CA 92521

Executive Committee Members at Large

John Stark (2000)
Edward J. Bechinski (2000)
Larry D. Godfrey (2001)
Vincent P. Jones (2001)
Eric Natwick (2002)
Raymond K. Yokomi (2002)

Headquarters and Meetings

DoubleTree Hotel
3050 Bristol St.
Costa Mesa, CA 92626
(714) 540-0719

Future Meetings

2001 - Park City, Utah
2002 - South Lake Tahoe, NV

MEETING NOTES

REGISTRATION:

Sunday, June 25 6:00 p.m.-9:00 p.m.
Monday, June 26 8:00 a.m.-4:00 p.m.
Tuesday, June 27 8:00 a.m.-12:00 noon

Everyone attending the Pacific Branch meeting or participating in the Special Events Program must register. The registration desk will be located in the foyer located outside the Doubletree Ballroom, III and IV. On-site registration is \$110 for members, \$50 for students, and \$120 for non-members. Registration is complimentary for honorary members, emeritus members, associates (spouses and guests), and invited participants from outside the Pacific Branch or outside the profession.

AWARDS LUNCHEON: Our awards luncheon will be held starting at noon Tuesday, June 27, in the Fountain Terrace. Tickets are \$25 each at the registration desk.

BRANCH MIXER: The mixer is scheduled for Monday evening, June 26, from 5:30-7:00 p.m. in the Fountain Terrace. Drinks and heavy appetizers will be served. Tickets for guests are \$10 each at the registration desk.

AUDIO VISUAL: An overhead projector package, a 35MM slide projector package, and an LCD data display package are available for your use. Speakers may practice their presentation as follows:

Sun, June 25, Costa Mesa Boardroom, 6:00-9:00 p.m.
Mon., June 26, Costa Mesa Boardroom, 9:00 a.m.-6:00 p.m.
Tues., June 27, Costa Mesa Boardroom, 9:00 a.m.-6:00 p.m.

POSTER DISPLAY PRESENTATIONS: Poster displays will be presented in Emerald I on Tuesday, June 26, from 9:00 a.m. to 5:00 p.m. Emerald I will be open for authors to set up their displays in advance on Monday, June 26, from 6:00 to 9:00 p.m. and on Tuesday, June 27, from 8:00 to 9:00 a.m. Displays should be taken down by 6:00 p.m. Tuesday, June 27. Poster boards are 4' x 4' and push-pin friendly. Authors, please bring your own push-pins and post your displays to indicate when you will be present to discuss your presentation.

NOMINATIONS FOR PRESIDENT-ELECT:



The nominations Committee, Robert A. van Steenwyk (chair), Kris Godfrey, and Michael Brewer recommend Dr. Frank Zalom for President-elect of the Pacific Branch. Dr. Zalom is Director of the University of California Statewide Integrated Pest Management (UCIPM) Project, part of UC's Division of Agriculture and Natural Resources. His entomology activities focus primarily

on horticultural fruit crops. Dr. Zalom received his BS and MS degrees from Arizona State University, and his Ph.D. from UC Davis.

His honors and awards include the Entomological Society of America's Distinguished Achievement Award in Extension (1992), the University of California Assembly Council/California Farm Bureau Federation's "Outstanding Academic Administration" (1999) awards, and the "Excellence in Entomology Award" from the American

Registry of Professional Entomologists (1989). He was elected a Fellow of the California Academy of Sciences in 1990, received a Fulbright Senior Research Fellowship to Spain in 1992-93, and was named a Visiting Fellow of the Victoria (Australia) Department of Agriculture. This year he received an Achievement Award from the Friends of Agricultural Extension.

Dr. Zalom was Secretary/Treasurer of the Pacific Branch from 1984 through 1989, and has served the branch on its Executive, Local Arrangements, Program, Awards, Student Paper, Student Poster, and Resolutions Committees.

INFORMATION: Notices, meeting schedule changes and general information will be posted throughout the meeting on a bulletin board. Personal messages may also be posted. Information on points of interest, dining, and entertainment will also be available from the hotel.

EXECUTIVE COMMITTEE: The Executive Committee of the Pacific Branch will meet Sunday evening, June 25, from 6:00-9:00 p.m. in the Anacapa Boardroom and Tuesday, June 27, from 5:00-6:00 p.m. in the Costa Mesa Boardroom.

MEETING SCHEDULE: Session moderators are responsible for keeping speakers on schedule. If a presentation is completed early, or cancelled, the moderator must insure that the next presentation begins at the scheduled time. Sessions must not get ahead or fall behind schedule.

LINNAEAN GAMES: The Games will be held on Monday, June 26, from 7:30-10:00 p.m. in the Pacific Ballroom III and IV. Contact Dr. Darcy Reed, UC Riverside, for more information.

AWARDS: The C. W. Woodworth Award and the Comstock Award will be presented during the opening session on Monday, June 26. All other awards will be presented during the awards luncheon on Tuesday, June 27.

HOUSING AND TRANSPORTATION: Headquarters for the meeting will be at the DoubleTree Hotel, 3050 Bristol St., Costa Mesa, California, (714) 540-7000. The hotel is located 5 minutes from John Wayne Airport. Free ground transportation to the airport is provided by the hotel.

WEATHER: The weather in Costa Mesa during June is excellent! Daytime temperatures average around 80°F with nighttime lows in the 60s.

Program
Pacific Branch, Entomological Society of America
June 25-27, 2000

Sunday, June 25

Executive Committee Meeting
Costa Mesa Board Room

6:00 p.m. - 9:00 p.m.

Registration
Ballroom Foyer

6:00 p.m. - 9:00 p.m.



Monday, June 26

Opening Session
Doubletree Ballroom, Rooms III and IV

8:00 a.m. - 10:00 a.m.

Welcome
Tim Paine, President, Pacific Branch, Entomological Society of America

Opening Remarks
Sharron Quisenberry, President, Entomological Society of America
Jim Olmes, Executive Director, Entomological Society of America

2000 Pacific Branch Comstock Award Winner
Dr. Alec Gerry (45 minutes)

Woodruff Award

Student Symposium
Doubletree Ballroom, Rooms III and IV

10:00 a.m. - Noon

<u>Time</u>	<u>Paper:</u>	<u>Presenter:</u>
10:00 a.m.	"Particle Selection and Use of Agal Monocultures by Larval Mosquitoes"	<i>L. Hannah Gould, William E. Walton, UC Riverside</i>
10:20 a.m.	"Sex Pheromones of the Stink Bugs <i>Chlorochroa ligata</i> , <i>C. sayi</i> , and <i>C. uhleri</i> "	<i>Hsiao-Yung Ho, Jocelyn G. Millar, UC Riverside</i>
10:40 a.m.	"Effects of Nonhost Plants on <i>Artogeia rapae</i> and Other Lepidopterous Herbivores in Diverse Cruciferous Habitats"	<i>Cerruti R. R. Hooks, University of Hawaii</i>
11:00 a.m.	"Proximate and Ultimate Mechanisms in the Honey Bee Mating System"	<i>David R. Tarpy, UC Davis</i>

- 11:20 a.m. "The Influence of Moisture on Chemical Availability Following Indoor Application"
 11:40 a.m. "Dynamics of Intraspecific Competition in the Whitefly Parasitoid *Encarsia formosa*"

Ryan L. Williams, Robert I. Krieger, UC Riverside

Albert K. Owen, Molly Hunter, University of Arizona

Lunch Break

12 Noon - 1:00 p.m.

***Student Competition
Emerald I***

1:00 - 3:00 p.m.

Judges: Peggy Wirth, UC Riverside, Eric Natwick, UC Davis

M.S.

<u>Time:</u>	<u>Paper:</u>	<u>Presenter:</u>
1:05 p.m.	"Early Seasonal Population Parameters Predict Grape Leafhopper Population Size"	<i>Dino Garcia-Rossi, Sonoma State University, Lucia G. Varela, UCCE Sonoma County</i>
1:17 p.m.	"Survey of Leafhoppers (Homoptera: Cicadellidae) in Willamette Valley Vineyards"	<i>Leslie M. Viguers, James R. Fisher, Oregon State University</i>
1:29 p.m.	"Preference and Performance of an Insect Herbivore on <i>Quercus agrifolia</i> and <i>Quercus engelmannii</i> Seedlings"	<i>Connell E. Dunning, Timothy D. Paine, Richard A. Redak, UC Riverside</i>

Ph.D.

<u>Time:</u>	<u>Paper:</u>	<u>Presenter:</u>
1:41 p.m.	"Effects of Phosphorus on Growth in Larval <i>Manduca sexta</i> "	<i>Marc C. Perkins, H. Arthur Woods, Jon F. Harrison, Arizona State University</i>
1:53 p.m.	"Determining Colony Boundaries in Eusocial Insects: Why We Should Care"	<i>Kirsten A. Copren, UC Davis</i>
2:05 p.m.	"Plant Allocation to Defensive Compounds Under Elevated Atmospheric CO ₂ "	<i>Carlos E. Coviella, UC Riverside, Richard D. Stipanovic, USDA ARS, John T. Trumble, UC Riverside</i>
2:17 p.m.	"Codling Moth (Lepidoptera: Tortricidae) Host Selection and Cultivar-Specific Mortality"	<i>Santiago Martí, Helmut Riedl, Oregon State University</i>
2:29 p.m.	"Reclamation of Selenium-Contaminated Sites: Response of <i>Spodoptera exigua</i> to Selenium-Treated <i>Atriplex</i> Plants"	<i>Danel B. Vickerman, UC Riverside, Michael C. Shannon, Gary S. Banuelos, USDA ARS, John T. Trumble, UC Riverside</i>
2:41 p.m.	"Evaluation of "Green" and "Red" Strains of <i>Heterorhabditis bacteriophora</i> (Rhabditida: Heterorhabditidae) from Italy"	<i>Tae-Hwan Kim, Oregon State University, Eustachio Tarasco, DIBICA, Bari, Italy, Ralph E. Berry, Oregon State University</i>

Insect Molecular Biology

Emerald I

1:00 - 3:00 p.m.

Moderator:

Peter Atkinson, UC Riverside

Time:

Paper:

- 3:00 p.m. "Molecular Physiology of Ecdysis-Triggering Hormones"
- 3:20 p.m. "Engineering Malaria Resistance in Mosquitoes"
- 3:40 p.m. "New Genes in Tick Feeding: New Compounds for Tick Control"
- 4:00 p.m. "Genetic Transformation of Wild Type Yellow Fever Mosquito, *Aedes aegypti*, Using the *Hermes* Gene Vector and the Green Fluorescent Protein as a Genetic Marker"
- 4:20 p.m. "Identification of the Sex-Determination Gene, *Transformer-2* of Medfly, *Ceratitis capitata*"

Presenter:

***Michael E. Adams*, Yoonseong Park, John L. Hermesman, Valery Phillipov, UC Riverside, Dusan Zitnan, Slovak Academy of Sciences, Sarjeet S. Gill, UC Riverside**

***Margareth de L. Capurro*, J. Coleman, UC Irvine, K. E. Olson, Colorado State University, B. T. Beernsten, UC Irvine, E. Rocha, Univ. Federal de Alagoas, A. U. Krettli, FIOCRUZ, A. A. James, UC Irvine**

***Deborah C. Jaworski*, Algis Jasinskis, Alan G. Barbour, UC Irvine**

***Alexandra C. Pinkerton*, UC Riverside**

***Mark A. Robertson*, UC Riverside**

Glassy Winged Sharpshooters and Pierce's Disease: A Threat to California Agriculture

Emerald II

1:00 p.m. - 5:00 p.m.

Moderator:

Richard A. Redak, UC Riverside

Time:

Papers:

- 1:00 p.m. "The Role of Feeding Behavior and Nutrition in the Ecology of *Homalodisca coagulata*, the Glassy-Winged Sharpshooter"
- 1:25 p.m. "Introduction to Pierce's Disease and Its Possible Cures: Insights from Temecula"
- 1:50 p.m. "Current CDFR Activities Related to the Glassy-Winged Sharpshooter"
- 2:15 p.m. "Current USDA Activities Related to the Glassy-Winged Sharpshooter and Pierce's Disease in Temecula"
- 2:40 p.m. "Interactions Among Organisms Driving the Epidemic of Pierce's Disease in Temecula"

Presenter:

***Russ F. Mizell, III*, Peter C. Andersen, Brent V. Brodbeck, University of Florida**

***Bruce Kirkpatrick*, UC Davis**

***Robert Dowell*, CDFR**

***Edwin L. Civerolo*, David H. Akey, Steven J. Castle, M. Ciomperlik, D. Michael Glenn, Thomas J. Henneberry, Walker A. Jones, T. Poprawski, Gary J. Puterka, L. Wendel, USDA**

***Matthew Blua*, UC Riverside**

Winegrapes"

Break

- 3:15 p.m. "The Temecula Glassy-Winged Sharpshooter Program - Admire Treatment: Boom or Bust? Success or Failure?" *Nick Toscano, UC Riverside*
- 3:40 p.m. "Identifying Inoculum Sources and Transmission Pathways of *Xylella fastidiosa*" *Heather S. Costa, Donald A. Cooksey, Carmen Gispert, UC Riverside*
- 4:05 p.m. "The Relationship of Glassy-Winged Sharp-shooter to San Joaquin Valley Citrus" *Elizabeth E. Grafton-Cardwell, UC Riverside*
- 4:30 p.m. "Biological Control of GWSS/Current Status and Research Results" *David Morgan, UC Riverside*

Mixer

Fountain Terrace

5:30 p.m. - 7:00 p.m.

Linnaean Games

Doubletree III and IV

7:30 p.m. - 10:00 p.m.



Tuesday, June 27

Poster Session

Emerald I

8:00 a.m. - 5:00 p.m.

Judges of student competition: Raymond K. Yokomi, USDA, ARS, Vincent P. Jones, University of Hawaii

Undergraduate:

"Oviposition Behavior of the Parasitoid of Eucalyptus Longhorned Borers"

Heather Yaffee, Katherine Luhring, Timothy D. Paine, Jocelyn G. Millar, UC Riverside

Ph.D.:

"Oviposition of *Homalodisca spp.* (Hemiptera: Cicadellidae) and Associated Egg Parasitism on Citrus: Spatial Distribution"

Ali K. Al-Wahaibi, Joseph G. Morse, UC Riverside

"Effect of Host Larval Age on Sex Ratio of Progeny of *Syngaster lepidus* (Braconidae) Attacking *Phoracantha semipunctata* (Cerambycidae) and *P. recurva* Borers on *Eucalyptus camaldulensis*"

Andrea Joyce, UC Riverside, Lawrence M. Hanks, University of Illinois, Timothy D. Paine, Jocelyn G. Millar, UC Riverside

"Host Preference and Performance of *Bemisia argentifolii* on Poinsettia in Relation to Cultivar"

Laura O. Petro, Richard A. Redak, UC Riverside

Submitted:

"Colonization of Newly Constructed Wetlands by Diptera"

"Biological Control of Giant Whitefly"

"The Vine Mealybug in California Grapes"

"Biorational Approach to Suppressing American Cockroaches, *Periplaneta americana* (L), in Sewage Systems"

"Integrated Fruit Production (IFP) Program for Pears in the Hood River District, Oregon"

"Increased Persistence of *Beauveria bassiana* Spore Viability Under High Ultraviolet-Blocking Greenhouse Plastic"

"Hessian Fly: Effects of Tillage and Cropping System on Population Densities"

"Economic Analysis of Harvest Frequency as a Management Tool for Tropical Nut Borer on Macadamia"

"Success* Naturalyte* Insect Control: New Uses and IPM Applications"

"IRAC US: The Insecticide Resistance Action Committee"

"Evaluation of IPM Practices for Controlling the Spread of Tomato Spotted Wilt Virus in Tomatoes"

"Current Analysis of Citrus Tristeza Virus in Central California"

"Assessment of Insecticide Efficacy for Root Weevil (Coleoptera: Curculionidae) Control"

Joe B. Keiper, William E. Walton, UC Riverside

Thomas S. Bellows, Carol Meisenbacher, Suzanne Mackzum, Andrea Briones, Jennifer Cruz, UC Riverside

Kris E. Godfrey, Joe C. Ball, CDFA

Michael K. Rust, Eileen O. Paine, UC Riverside

Helmut Riedl, C. Seavert, Oregon

State University

Heather S. Costa, UC Riverside, Karen L.

Robb, Cheryl A. Wilen, UCCE, San Diego County

Leslie R. Elberson, Stephen L. Clement,

Frank L. Young, Roger H. Ratcliffe, USDA ARS

Vincent P. Jones, Maria Aihara-Sasaki, University of Hawaii

Gary D. Thompson, Barat Bisabri, Jesse M.

Richardson, Mike Lees, James P. Mueller, Brian

L. Bret, Vanelle Carrithers, Dow AgroSciences

Gary Thompson, Dow AgroSciences

John T. Trumble, William Carson, Gregory Kund,

UC Riverside

Raymond K. Yokomi, USDA ARS, Elizabeth E.

Grafton-Cardwell, UC Riverside, MaryLou Polek,

Gen. Cal. Tristeza Erad. Ag., Mark E. Hilf, Edward

L. Civerolo, USDA ARS

Robin Rosetta, Sven Svenson, Oregon State

University

8:00 a.m. - Noon

10-Minute Paper Session

Emerald II

Moderator:

Patrick V. Vail, USDA ARS

8:00 a.m. "Identification of Species in the *Bactrocera dorsalis* Complex Using DNA Markers"

8:12 a.m. "Development and Evaluation of Artificial Diets for Rearing Loosestrife Root Weevil (*Hylobius transversovittatus* Goeze)"

8:24 a.m. "New Correlations of Electrical Penetration

David S. Haymer, Mei He, University of Hawaii

Luis Matos, John J. Brown, Washington State University

Yongxing Jiang, Gregory P. Walker, UC

Graph Waveforms and Stylet Penetration by
Bemisia argentifolii"

Riverside

8:36 a.m. "Field Attraction of Conspense Stink Bug,
Euschistus conspersus, to Synthetic Pheromone
Sources"

Christian H. Krupke, Jay F. Brunner, Michael
D. Doerr, Washington State University

8:48 a.m. "Sex Pheromones of the Stink Bugs *Thyanta*
pallidovirens and *Acrosternum hilare*
(Heteroptera: Pentatomidae)"

Heather L. McBrien, Jocelyn G. Millar, J. Steven
McElfresh, UC Riverside, Eileen Cullen, Frank G.
Zalom, Richard E. Rice, UC Davis

9:00 a.m. "Temporal Polyethism and Cuticular
Hydrocarbons in Harvester Ants"

Madeleine Tissot, Deborah M. Gordon, Stanford
University

9:12 a.m. "Expression of *Bacillus thuringiensis* Insecticidal
Crystal Protein Fragments for Control of Walnut
Insect Pests"

Patrick V. Vail, USDA ARS, Abhaya Dandekar,
UC Davis, J. S. Tebbets, USDA ARS, S. Leslie
Uratsu, G. H. McGranahan, C. A. Leslie, UC Davis

9:24 a.m. "Nutrient Flow and Implications for Baiting in the
Western Subterranean Termite *Reticulitermes*
hesperus"

Karl Haagsma, Michael K. Rust, UC Riverside

9:36 a.m. "A New Bipartite Geminivirus
Associated with Silverleaf Whitefly
and Melons"

Eric Natwick, Thomas Turini, Keith Mayberry,
UCCE, Imperial County, Robert L. Gilbertson,
Pablo Guzman, Mysor eR. Sudarshana, Yuong-Su
Seo, Maria Rojas, UC Davis

9:48 a.m. "Potential Impacts of Salmon Habitat Restoration
on Population Abundance of Pest Arthropods"

Douglas B. Walsh, Washington State University

10:00 a.m. "Why Schools Fail in Their Implementation of
IPM"

Marc L. Lame, Indiana University

The Changing Face of California IPM Symposium **Emerald III**

8:00 a.m. - Noon

Moderator:

Elizabeth E. Grafton-Cardwell, UC Riverside

8:05 a.m. "IPM in San Joaquin Valley Cotton: Moving
Toward Ecosystem Management"

Peter Goodell, Kearny Ag Center

8:30 a.m. "Pear IPM"

Lucia Varela, UCCE Sonoma County

8:55 a.m. "Prune IPM"

Carolyn Pickel, Bill Olson, UCCE

9:20 a.m. "Grape Integrated Pest Management: A Tale of
Three Commodities"

Walt Bentley, Kearney Ag Center

9:45 a.m. **Break**

10:10 a.m. "San Joaquin Valley Citrus IPM"

Elizabeth E. Grafton-Cardwell, UC Riverside

10:35 a.m. "Eucalyptus Pest Management"

Timothy D. Paine, UC Riverside

11:00 a.m. "IPM in Ornamental Crops: Roses as a Model
System"

Michael Parella, UC Davis

Lunch

12 Noon - 1:00 p.m.

Fountain Terrace

Medical and Veterinary Entomology

Anthony Cornell Symposium

Emerald II

Moderator:

Anthony Cornell, Kearney Ag Center

Jason Rasgon, UC Davis

Bruno Chomel, UC Davis

Anthony Cornell, Kearney Ag Center

10-Minute Paper Session

1:00 - 5:00 p.m.

Moderator:

Jesse Richardson, Dow AgroSciences

- 1:00 p.m. "Adult Sugarbeet Root Maggot Responses to Plant Volatiles"
- 1:12 p.m. "Sampling Methods for Orange Wheat Blossom Midge in Idaho"
- 1:24 p.m. "Overwintering Biology of the Cotton Aphid, *Aphis gossypii* Glover, in California's San Joaquin Valley"
- 1:36 p.m. "Influence of Cotton Nitrogen Fertility and Pyrethroid Application on Cotton Aphid Population Dynamics"
- 1:48 p.m. "Control of Wireworms in Potatoes with Telone Soil Fumigant"
- 2:00 p.m. "Impact of Insecticides on Lettuce Physiology"
- 2:12 p.m. "Association of Thrips and Strawberry Fruit Bronzing"
- 2:24 p.m. "Economic Impact of Clay Colored Weevil, *Otiorhynchus singularis* on "Meeker" Red Raspberry"
- 2:36 p.m. "Using Pheromones to Suppress Sap Beetle Populations (Coleoptera: Nitidulidae) in Australian Stone Fruit Orchards"
- 3:00 p.m. **Break**
- 3:24 p.m. "The Effect of a Particle Film on Pear Psylla

Edward J. Bechinski, Sanford D. Eigenbrode, Robert L. Stoltz, Lana M. Unger, University of Idaho

Edward J. Bechinski, David W. Wattenbarger University of Idaho

Jorge J. Cisneros, Larry D. Godfrey, UC Davis

Larry D. Godfrey, Jorge J. Cisneros, K. E. Keillor, R. B. Hutmacher, UC Davis

Brian L. Brett, Dow AgroSciences, G. L. Reed, Oregon State University, R. G. Beaver, SIARCO Fikru Haile, Jesse M. Richardson, Dow AgroSciences, David L. Kerns, University of Arizona

David D. Limburg, Frank G. Zalom, Douglas Shaw, UC Davis, Kirk Larson, UC Riverside, Steve Koike, UCCE, Salinas

Lynell Tanigoshi, C. Chen, G. W. Menzies, Washington State University

David G. James, Washington State University, Robert J. Bartelt, USDA-ARS, Chris Moore, DPI, Queensland, Australia

Richard J. Hilton, Southern Oregon Research

- 3:36 p.m. and Two-Spotted Spider Mite Oviposition"
"Feeding and Development of Codling Moth,
Cydia pomonella, (L) Larvae on Apple Tree
Leaves"
- 3:48 p.m.. "Codling Moth Resistance in Walnuts and a
Potential Resistance Management Strategy"
- 4:00 p.m. "Avocado Thrips Management with Success[®]
and Agri-Mek[®] "
- 4:12 p.m. "Impact of a Cover Crop on Populations of
Arthropods in Citrus"
- and Extension Center*
Maciej A. Pszczolkowski, Luis Matos, John
J. Brown, Washington State University
- Robert A. van Steenwyk**, Stephen C. Welter,
UC Berkeley
- Jesse M. Richardson**, Dow AgroSciences, Joseph G.
Morse, UC Riverside, Wee Yee, UCCE, Kris E.
Tollerup, UC Riverside, Phil A. Phillips, Ben A.
Faber, UCCE, Gary D. Thompson, Brian L. Brett,
Dow AgroSciences
- Neil V. O'Connell**, Craig E. Kallsen, Blake L.
Sanden, UCCE