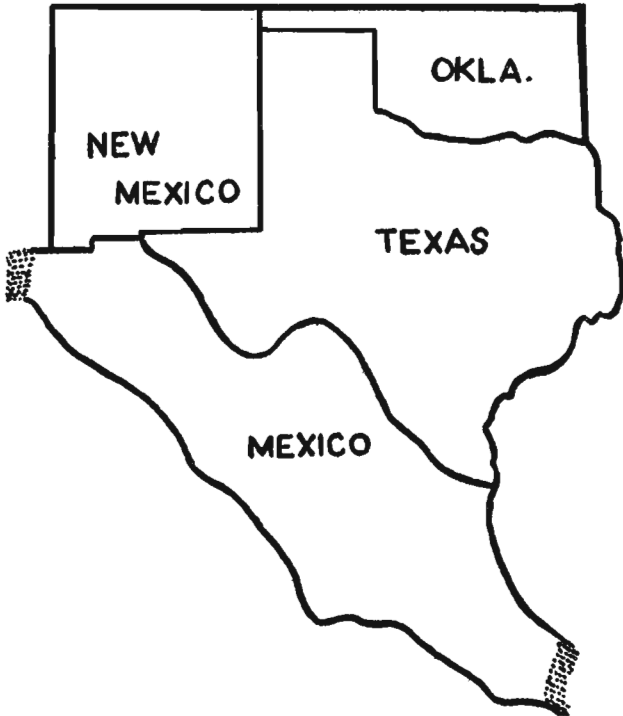


SOUTHWESTERN BRANCH

**ENTOMOLOGICAL SOCIETY**

**OF AMERICA**

*Eighteenth Annual Meeting*



**FORT BROWN MOTEL  
BROWNSVILLE, TEXAS**

February 15-17, 1970

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Fourth U. S. Army  
Fort Sam Houston, Texas

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**PROGRAM**  
**EIGHTEENTH ANNUAL MEETING**  
Southwestern Branch  
**ENTOMOLOGICAL SOCIETY**  
**OF AMERICA**

**Sunday, February 15**

P.M.

3:00-6:00 Registration--Lobby of Fort Brown Motel  
7:00-8:30 Mixer--Fortress Room

**Monday, February 16**

A.M.

8:00-12:00 Registration--Lobby of Fort Brown Motel  
Ladies Program - See Page 11.  
8:30 General Session, Fortress Room

Invocation. Mr. Sam Perl, Jewish Lay Rabbi, Temple Beth El, Brownsville, Texas.

Address of Welcome. The Honorable Antonio Gonzales, Mayor, Brownsville, Texas.

Address of Chairman, Southwestern Branch, Entomological Society of America. Ted McGregor.

Announcements and Committee Appointments.

Report of the Southwestern Branch Member of the Governing Board, Entomological Society of America. D. C. Earley.

Remarks of the President, Entomological Society of America. Paul O. Ritcher, Department of Entomology, Oregon State University, Corvallis, Oregon.

Remarks of the Executive Secretary, Entomological Society of America. Wallace P. Murdoch, College Park, Maryland.

10:30 Recess

11:00 Invitational Address. The Present Status of the Development of Insect Hormone Analogs for Insect Control. Gerardus B. Staal, Zoecon Corporation, Palo Alto, California.

11:45 Noon Recess

**Monday, February 16, Fortress Room**  
**Crop Protection Entomology**

R. L. RIDGWAY, Presiding

P.M.

- 1:20 Results of 1969 Laboratory Insecticide Testing. Stanley J. Nemeec, Dept. Ent., Texas A & M U., College Station, Texas.
- 1:30 Field Evaluation of Insecticides for Control of Cotton Insects, Waco Area, Central Texas, 1969. C. B. Cowan, Jr. and J. W. Davis, ENT, ARS, USDA, Waco, Texas.
- 1:40 Control of Resistant Carmine Spider Mites in Cotton. R. L. Hanna, Texas A & M U., College Station, Texas
- 1:50 Distribution of Infested Cotton Fields in Relation to the Overwintering Habitat of the Boll Weevil in the High and Rolling Plains of Texas. D. R. Rummel, Texas A & M U., South Plains Res. and Ext. Center, Lubbock, Texas
- 2:00 The Dispersal of Boll Weevils onto the Texas High Plains. R. E. Reeves and D. G. Bottrell, Texas Agric. Exp. Sta., Lubbock, Texas.
- 2:10 Patterns of Short Range Dispersal of Boll Weevils in the Texas Rolling Plains. D. S. Moody and D. G. Bottrell, Texas Agric. Exp. Sta., Lubbock, Texas.
- 2:20 Diapause Boll Weevil Control - Texas Plains. W. H. Hare, PPD, ARS, USDA, San Antonio, Texas.
- 2:30 Sterile-Male Technique for Control of the Tobacco Budworm: Laboratory and Field-Cage Experiments. Dan A. Wolfenbarger and A. A. Guerra, ENT, ARS, USDA, Brownsville, Texas.
- 2:40 Field Test of Sterile Insect Release for Pink Bollworm Control. H. M. Graham, ENT, ARS, USDA, Brownsville, Texas.
- 2:50 Corn Rootworm Control with Granular Insecticides in the Oklahoma Panhandle. Stanley Coppock, Dept. Ent., Okla. State U., Stillwater, Oklahoma.
- 3:00 Recess

**Monday, February 16, Azetec Room**  
**Medical and Veterinary Entomology**

R. L. HARRIS, Presiding

P.M.

- 1:20 **In vitro** Colonization and Biology of **Bovicola ovis**. D. E. Hopkins, ENT, ARS, USDA, Kerrville, Texas.
- 1:30 Goat Lice (**Bovicola** spp.) Control with Dichlorvos Impregnated Strips. D. I. Darrow, ENT, ARS, USDA, Kerrville, Texas.
- 1:40 Observations on Oviposition of the Gulf Coast Tick. R. O. Drummond and T. M. Whetstone, ENT, ARS, USDA, Kerrville, Texas.
- 1:50 Induced Spermatophore Transfer and Fertilization of Lone Star Ticks **in vitro**. William J. Gladney and R. O. Drummond, ENT, ARS, USDA, Kerrville, Texas.
- 2:00 The Response of the Rabbit Tick, **Haemaphysalis leporispalustris**, to Carbon Dioxide. Bart Cook, Biol. Dept., Texas Tech U., Lubbock, Texas.
- 2:10 Humidity Responses of **Argas cooleyi** (Acari: Argasidae). Fred G. Howell and John E. George, Biol. Dept., Texas Tech U., Lubbock, Texas.
- 2:20 Feeding Behavior of **Antricola coprophilus** (Acari: Argasidae). John E. George, Biol. Dept., Texas Tech U., Lubbock, Texas.
- 2:30 Methods of Testing Pesticides for Control of Ticks, Fleas, and Mites Infesting Dogs. J. G. Medley, PR, ARS, USDA, Kerrville, Texas.
- 2:40 Additional Promising Chemicals for the Control of the Turkey Chigger, **Neoschongastia Americana** Hirst (Trombiculidae: Acarina). Manning A. Price, Sidney E. Kunz, and Ronald E. Everett, Texas A & M U., ENT, ARS, USDA, Texas A & M U., College Station, Texas.
- 2:50 Collecting and Rearing Techniques for **Dermatophagoides farinae** (Hughes, 1961) an Allergen Producer in House Dust. C. C. Hall, U. of Texas, Arlington, Texas.
- 3:00 Recess

Monday, February 16, Fortress Room  
Crop Protection Entomology

H. M. GRAHAM, Presiding

P.M.

- 3:20 Insecticidal Control of the Sorghum Midge, *Contarinia sorghicola* (Coquillett), in Grain Sorghum. J. R. Cate, Jr., Texas A & M U. Agric. Res. and Ext. Center, Lubbock, Texas.
- 3:30 Greenbug Resistance in Sorghum. E. A. Wood, Jr., ENT, ARS, USDA, Stillwater, Okla.
- 3:40 Effects of Insecticide Phytotoxicity on 6 Varieties of Grain Sorghum. M. V. Meisch, George L. Teetes, N. M. Randolph, and A. J. Bockholt, Dept. Ent., and Dept. Soil and Crop Sciences, Texas A & M U., College Station, Texas.
- 3:50 Juice Quality of Valencia Oranges as Affected by Petroleum Oils Applied During the Post-Bloom and Summer Periods. H. A. Dean and Clifford E. Hoelscher, Texas A & M U. Agric. Res. and Ext. Center, Weslaco, Texas.
- 4:00 Evaluation of Malathion for the Control of the Stored Corn Weevil, *Sitophilus zeamais* Mots., in Three Types of Grain. Gabriel Diaz C., Centro de Investigaciones Agricolas del Bajio, Celaya, Guanajuato, Mexico.
- 4:10 Losses Caused by Different Number of Adults of Spittle Bugs to Pangola Grass in Cotaxtla, Veracruz. Hermenegildo Velasco P. and J. A. Sifuentes, Programa de Investigaciones sobre plagas de los pastos en la region del Golfo de Mexico, Cotaxtla, Veracruz and Instituto Nacional de Investigaciones Agricolas, S.A.G. Mexico.
- 4:20 Screening of Insecticides for Controlling the Tomato Pinworm, *Keiferia lycopersicella* (Busck) in Guaymas, Sonora, Mexico. Francisco Pacheco M., Centro de Investigaciones Agricolas del Noroeste, Ciudad Obregon, Sonora, Mexico.
- 4:30 Preliminary Observations for the Control of the Tomato Pinworm, *Keiferia lycopersicella* (Busck), in the Valley of Culiacan. Felicitos Hernandez R., Centro de Investigaciones Agricolas de Sinaloa, Culiacan, Sinaloa, Mexico.
- 4:40 Plant Quarantine Entomology. G. O. Burgess and J. L. Ward, PQD, ARS, USDA, Brownsville, Texas.
- 8:00 BANQUET--Matamoros, Mexico.

**Monday, February 16, Azetec Room**  
Medical and Veterinary Entomology

WILLIAM L. BARRETT, Presiding

P.M.

- 3:20 Factors Affecting Eclosion Rhythms in the Screw-Worm Fly, *Cochliomyia hominivorax* (Coquerel). B. G. Hightower and G. E. Spates, Jr., ENT, ARS, USDA, Mission, Texas.
- 3:30 Attractancy of Bovine Blood Constituents for Screw-Worm Flies. Walter S. Bigley and John P. Turner, ENT, ARS, USDA, Mission, Texas.
- 3:40 Effects of the Removal of the Antennae, Mouth Parts, Tarsi, and Legs on Olfactory Responses of the Screw-Worm Fly. Joyce A. DeVaney, Gaines W. Eddy, Bobby D. Handke, and Erasmo Lopez, ENT, ARS, USDA, Mission, Texas.
- 3:50 Effects of Delayed Fertilization in Screw-Worm Flies (Diptera: Calliphoridae) on Induction of Dominant Lethal Mutations by  $N,N'$ -Tetramethylenebis(1-Aziridinecarboxamide). Maxwell M. Crystal, ENT, ARS, USDA, Mission, Texas.
- 4:00 Different Responses of House Flies to Light and Color. O. Hecht, Escuela Nacional de Ciencias Biologicas, Inst. Politecnico Nacional, Mexico, D. F.
- 4:10 Trapping Tabanids with Modified Malaise Traps Baited with CO<sub>2</sub>. Richard R. Blume and James L. Eschle, and J. A. Miller, ENT, ARS, USDA and AE, ARS, USDA, Kerrville, Texas.
- 4:20 The Production of Horn Flies Under Field Conditions in Central Texas. Sidney E. Kunz, ENT, ARS, USDA, College Station, Texas.
- 4:30 Effects of Density of Horn Flies when Cage Size is Varied. C. D. Schmidt, J. L. Eschle, and C. R. Ward, ENT, ARS, USDA, Kerrville, Texas and Texas Tech U., Lubbock, Texas.
- 4:40 Adult Horn Fly Emergence Patterns Under Laboratory and Field Conditions. R. L. Harris, E. D. Frazar, and J. A. Miller, ENT, ARS, USDA, and AE, ARS, USDA, Kerrville, Texas.
- 4:50 Summer Weight Gains by Yearling Steers Treated with Coumaphos. Stanley Coppock, Dept. Ent., Okla. State U., Stillwater, Oklahoma.
- 8:00 BANQUET

**Tuesday, February 17, Fortress Room**  
Physiology, Biochemistry, & Toxicology

C.C. HALL, Presiding

A.M.

- 8:30 Electrophysiology of Pheromone Reception: Southern Pine Beetle. T. L. Payne, Dept. Ent., Texas A & M U., College Station, Texas.
- 8:40 *Thanasimus dubius*: Prey Perception. J. P. Vite & D. L. Williamson, Boyce Thompson Inst., Beaumont, Texas.
- 8:50 Production of Aggregating Pheromones in Re-Emerged Parent Females of the Southern Pine Beetle. Jack E. Coster, Dept. of Ent., Texas A & M U., College Station, Texas.
- 9:00 Effects of Reserpine and Gamma Radiation Treatments on Reproduction of the Tobacco Budworm. A. A. Guerra, D. A. Wolfenbarger, & M. J. Lukefahr, ENT, ARS, USDA, Brownsville, Texas.
- 9:10 Biochemical Studies of Organophosphorus Insecticide Resistance in the Tobacco Budworm. C. J. Whitten & D. L. Bull, ENT, ARS, USDA, College Station, Texas.
- 9:20 The Release of Aldicarb and Dimethoate from Plastic Formulations into Soil and Water. R. A. Stokes, J. R. Coppedge, R. L. Ridgway, & D. L. Bull, ENT, ARS, USDA, College Station, Texas.
- 9:30 Dosage Mortality Studies on Laboratory Reared and Field Collected Larvae of the Hickory Shuckworm, *Laspeyresia caryana* (Fitch). David J. Boethel & Horace W. Van Cleave, Dept. Ent., Texas A & M U., College Station, Texas.
- 9:40 Recess

**Tuesday, February 17, Azetec Room**  
**Ecology, Behavior, & Bionomics**

H. A. DEAN, Presiding

A.M.

- 8:30 Oviposition by Two Species of Marsh Grasshoppers, *Leptysma marginicollis* (Serville) and *Metaleptea brevicornis* (Johannson). John Roy Hilliard, Jr., Dept. Biol., Sam Houston State U., Huntsville, Texas.
- 8:40 Studies of the Spermatozoa of Some Water Beetles. Everett Simmons & Osmond P. Breland, Univ. of Texas, Austin, Texas.
- 8:50 Biological Observations on Wasps of the Genus *Microstictia*. James E. Gillaspay, Texas A & I U., Kingsville, Texas.
- 9:00 Biology of the Pecan Weevil, *Curculio caryae* (Horn), in Texas. Stephen J. Harp and Horace W. Van Cleave, Dept. Ent., Texas A & M U., College Station, Texas.
- 9:10 Review of Research on the Relationship Between Bollworm Populations and Moon Phases. Stanley J. Nemeč, Dept. of Ent., Texas A & M U., College Station, Texas.
- 9:20 Population Dynamics of the Boll Weevil and Modified Fruiting Types of Cotton: Implications for Pest Management. J. K. Walker & G. A. Niles, Texas A & M U., College Station, Texas.
- 9:30 Bollworm Control in Cotton with Artificial Lights. Stanley J. Nemeč, Albert W. Hartstack, & Joe P. Hollingsworth, Dept. of Ent., Texas A & M U., and AE, ARS, USDA, College Station, Texas.
- 9:40 Importance of the Natural Entomophagous Fauna in the Comarca Lagunera Region in Mexico. Jorge Estrada S., & Jose L. Carrillo S., Centro de Investigaciones Agrícolas del Noreste, Torreon, Coah., & Instituto Nacional de Investigaciones Agrícolas, S.A.G. Mexico.
- 9:50 Recess

**Tuesday, February 17, Fortress Room**

- A.M.
- 10:20 Symposium--Insecticides in Our Environment. Moderator: O. H. Graham, ENT, ARS, USDA, Kerrville, Texas.
- 10:30 Present Use and Future Need For Insecticides. J. M. Magner, Monsanto Company, St. Louis, Mo.
- 10:55 Monitoring Insecticide Residues in the Estuarine Environment. Ray Childress, Texas Parks & Wildlife Dept., Seadrift, Texas.
- 11:20 Pesticides and Human Health. G. A. Reich, Div. of Community Studies, FDA, HEW, Public Health Service, Chamblee, Georgia.
- 11:45 Discussion
- 12:00 Recess

**Fortress Room**

Physiology, Biochemistry, & Toxicology

M. A. PRICE, Presiding

- P.M.
- 1:30 Effects of Ecdysones and Ecdysone-Analogs on Fecundity in the Stable Fly, *Stomoxys calcitrans*. James E. Wright, ENT, ARS, USDA, College Station, Texas.
- 1:40 Effect of Synthetic Juvenile Hormone on the Morphology, Molting, Survival, and Fecundity of *Bovicola limbata* when Incorporated into the Diet. W. F. Chamberlain & D. E. Hopkins, ENT, ARS, USDA, Kerrville, Texas.
- 1:50 Utilization of Soy Protein and Corn Cob Grits in the Diet Fed to Tobacco Budworms. J. R. Raulston & T. N. Shaver, ENT, ARS, USDA, Brownsville, Texas.
- 2:00 Effect of Pupal Heat Treatments on Reproduction of Bollworm and Tobacco Budworm. A. A. Guerra, ENT, ARS, USDA, Brownsville, Texas.
- 2:10 Final Business Meeting, Fortress Room, Ted McGregor, Presiding.

**Tuesday, February 17, Fortress Room**

A.M.

10:20 Symposium (See adjacent Page)

12:00 Recess

**Azetec Room**

Ecology, Behavior, & Bionomics

J. E. GILLASPY, Presiding

P.M.

1:30 Results of Small-Plot Field Trials with HD-1, a New Formulation of the **delta-Endotoxin of *Bacillus thuringiensis***. Howard T. Dulmage, D. A. Wolfenbarger, M. J. Lukefahr, & J. A. Correa, ENT, ARS, USDA, Brownsville, Texas.

1:40 Methodology of Distributing Lepidopterous Eggs as Hosts for ***Trichogramma*** in Cotton. J. G. Kim & P. D. Lingren, ENT, ARS, USDA, Brownsville, Texas.

1:50 The Role of Ants in the Biological Control of Brown Soft Scale, ***Coccus hesperidum*** L. William G. Hart, ENT, ARS, USDA, Weslaco, Texas.

2:00 ***Entomophthora floridana***: Its Occurrence, Distribution and Potential as a Biological Control Agent of Texas Citrus Mites in Texas. B. L. Jones & H. A. Dean, Texas A & M U. Agric. Res. & Ext. Center, Weslaco, Texas.

2:10 Final Business Meeting, Fortress Room, Ted McGregor, Presiding.