

# FLORIDA ENTOMOLOGIST

(An International Journal for the Americas)

Volume 75, No. 4

December, 1992

## TABLE OF CONTENTS

### WORKSHOP ON IMPORTANT ARTHROPOD PESTS OF THE CARIBBEAN BASIN AMENABLE TO BIOLOGICAL CONTROL: HOMOPTERA, COLEOPTERA, LEPIDOPTERA

MCCOY, C. W.— <i>Introduction</i> .....	399
CRUZ, C., AND A. SEGARRA— <i>Potential for Biological Control of Crop Pests in the Caribbean</i> .....	400
ROSEN, D., AND P. DEBACH— <i>Foreign Exploration: The Key to Classical Biological Control</i> .....	409
BUCKINGHAM, G. R.— <i>Role of Quarantine Facilities in Biological Control</i> .....	414
FURGESON, J. S.— <i>Biological Control: An Industrial Perspective</i> .....	421
ANDREWS, K. L., J. W. BENTLEY, AND R. D. CAVE— <i>Enhancing Biological Control's Contributions to Integrated Pest Management Through Appropriate Levels of Farmer Participation</i> .....	429
BROWNING, H. W.— <i>Overview of Biological Control of Homopterous Pests in the Caribbean</i> .....	440
GERLING, D.— <i>Approaches to the Biological Control of Whiteflies</i> .....	446
OSBORNE, L. S., AND Z. LANDA— <i>Biological Control of Whiteflies with Entomopathogenic Fungi</i> .....	456
OBRYCKI, J. J.— <i>Techniques for Evaluation of Predators of Homoptera</i> .....	472
BAKER, P. S., A. KHAN, A. I. MOHYUDDIN, AND J. K. WAAGE— <i>Overview of Biological Control of Lepidoptera in the Caribbean</i> .....	477
GELENTER, W. D.— <i>Application of Biotechnology for Improvement of Bacillus thuringiensis Based Products and Their Use for Control of Lepidopteran Pests in the Caribbean</i> .....	484
ALAM, M. M.— <i>Biological Control of Insect Pests of Crucifers in Selected West Indian Islands</i> .....	493
BELLOTTI, A. C., B. ARIAS V., AND O. L. GUZMAN— <i>Biological Control of the Cassava Hornworm <i>Erinnyis ello</i> (Lepidoptera: Sphingidae)</i> .....	506
IGNOFFO, C. M.— <i>Environmental Factors Affecting Persistence of Entomopathogens</i> .....	516
CAPINERA, J. L., AND N. D. EPSKEY— <i>Potential for Biological Control of Soil Insects in the Caribbean Basin Using Entomopathogenic Nematodes</i> .....	525
STOREY, G. K., AND C. W. MCCOY— <i>Potential for Biological Control of Soil Insects Using Microbial Pesticides in the Caribbean</i> .....	533
BARBERCHEK, M. E.— <i>Effect of Soil Physical Factors on Biological Control Agents of Soil Insect Pests</i> .....	539
SIRJUSINGH, C., A. KERMARREC, H. MAULEON, C. LAVIS AND J. ETIENNE— <i>Biological Control of Weevils and Whitegrubs on Bananas and Sugarcane in the Caribbean</i> .....	548

Continued on Back Cover

# FLORIDA ENTOMOLOGICAL SOCIETY

## OFFICERS FOR 1992-93

<i>President</i> .....	D. F. Williams
<i>President-Elect</i> .....	J. E. Peña
<i>Vice-President</i> .....	E. M. Thoms
<i>Secretary</i> .....	D. G. Hall
<i>Treasurer</i> .....	A. C. Knapp

### Other Members of the Executive Committee

J. L. Knapp	D. P. Wojcik	L. A. Wood	J. Hogsette
J. R. McLaughlin	O. Liburd	D. R. Suiter	

### PUBLICATIONS COMMITTEE

J. R. McLaughlin, USDA/ARS, Gainesville, FL ..... Editor

#### Associate Editors

##### *Agricultural, Extension, & Regulatory Entomology*

James R. Brown—Disease Vector Ecology & Control Center, NAS, Jacksonville, FL  
Richard K. Jansson—Tropical Research & Education Center, Homestead, FL  
Michael G. Waldvogel—North Carolina State University, Raleigh, NC

##### *Apiculture*

Stephen B. Bambara—North Carolina State University, Raleigh, NC

##### *Biological Control & Pathology*

Ronald M. Weseloh—Connecticut Agricultural Experiment Sta., New Haven, CT

##### *Book Reviews*

J. Howard Frank—University of Florida, Gainesville

##### *Chemical Ecology, Physiology, Biochemistry*

Louis B. Bjostad—Colorado State University, Fort Collins, CO

##### *Ecology & Behavior*

Theodore E. Burk—Creighton University, Omaha, NE

John H. Brower—Stored Product Insects Research Laboratory, Savannah, GA

##### *Forum & Symposia*

Carl S. Barfield—University of Florida, Gainesville

##### *Genetics & Molecular Biology*

Sudhir K. Narang—Bioscience Research Laboratory, Fargo, ND

##### *Medical & Veterinary Entomology*

Arshad Ali—Central Florida Research & Education Center, Sanford, FL

##### *Resumen*

J. E. Peña—Tropical Research & Education Center, Homestead, FL

##### *Systematics, Morphology, and Evolution*

Michael D. Hubbard—Florida A&M University, Tallahassee

Gary J. Steck—Florida State Collection of Arthropods, Gainesville

Willis W. Wirth—Florida State Collection of Arthropods

*Business Manager* ..... A. C. Knapp

FLORIDA ENTOMOLOGIST is issued quarterly—March, June, September, and December. Subscription price to non-members is \$30 per year in advance, \$7.50 per copy; institutional rate is \$30 per year. Membership in the Florida Entomological Society, including subscription to *Florida Entomologist*, is \$25 per year for regular membership and \$10 per year for students.

*Inquiries regarding membership and subscriptions should be addressed to the Business Manager, P. O. Box 7326, Winter Haven, FL 33883-7326.*

*Florida Entomologist* is entered as second class matter at the Post Office in DeLeon Springs and in Winter Haven, FL.

Manuscripts from all areas of the discipline of entomology are accepted for consideration. At least one author must be a member of the Florida Entomological Society. Please consult "Instructions to Authors" on the inside back cover.

This issue mailed January 15, 1993