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Scientists and Staff Move to New Facilities

U.S. Department of Agriculture, Agricultural Research Service, Center for Medical, Agricultural, and Veterinary Entomology / Florida A&M University – Center for Biological Control (USDA, ARS, CMAVE / FAMU-CBC) scientists, Drs. Stuart Reitz, Stephen Hight, Jesusa C. Legaspi, and their staff moved in April 2004, to four modular laboratories set up at the FAMU -



USDA-ARS-CMAVE / FAMU-CESTA, CBC, Modular laboratories, Tallahassee, FL.

Center for Viticulture on Mahan Dr., Tallahassee. The latter is located about 10 miles east of FAMU campus. Other facilities in the area include greenhouses, field equipment sheds and a 6-acre field plot. This federal-state land grant-partnership will enhance FAMU's undergraduate and graduate student training in the agricultural sciences. It will also address ARS and FAMU's commitment to serving the clientele's needs through agricultural research and technology development.

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CBC Students Awarded with Scholarship

Shambhu Katel, Stephen McLean and Oulimathe Paraiso, Entomology graduate students at FAMU, were presented cash awards from the William Peters Memorial Scholarship administered by Reuben Capelouto Foundation, during the Entomology Workshop luncheon banquet, Tallahassee, FL, November 6, 2003.



Left to right: Oulimathe Paraiso, Mr. Grant Capelouto, Shambhu P. Katel, Stephen McLean, and Dr. Lambert Kanga during the William Peters Memorial Scholarship awards.



Left to right: Dr. Manuel Pescador, John Dukes III, Dr. Jesusa C. Legaspi, and Jeffery Head during the FAMU-CESTA recognition awards.

FAMU-CESTA Recognition Awards

During the College of Engineering Sciences, Technology and Agriculture (CESTA) Banquet and Recognition Awards at FAMU, Tallahassee, FL, on February 18, 2003, the following current and former students and supporters of the FAMU Entomology program were awarded the following:

- Jeffery Head, Outstanding Undergraduate Student. J. Head is currently a junior Entomology major at FAMU-CESTA and employed under the ARS Student Career Experience Program.
- Dr. Oscar Liburd, Distinguished Young Alumnus. Dr. O. Liburd is a graduate of FAMU with a B.S. in Agricultural Sciences (major: Entomology) and is currently Assistant Professor in the Entomology & Nematology Department at the University of Florida (UF), Gainesville, FL.
- Mr. John Dukes III, Distinguished Alumnus. Mr. Duke is a long-time supporter of the Entomology Program at FAMU and currently owns a pest control business at Gainesville, FL.

New Faculty, Staff, and Students for 2003

The Center for Biological Control is pleased to welcome the following faculty, staff and students:

- **E. Sofia Baez** – Laboratory Assistant, University of Georgia; Project: Radiation biology of diamondback moth *Plutella xylostella* (L.); Supervisors: Dr. Stephanie Bloem / Dr. James E. Carpenter.
- **Antonio Francis** – Master Student, FAMU, CESTA, CBC; Project: Biological control and inherited sterility of diamondback moth, *Plutella xylostella* (L.); Major Professor: Dr. Kenneth A. Bloem.
- **Kirphton Fray** – M. S. Student, FAMU, CESTA, CBC; Project: Fungal pathogens on major pests on honey bees or grapes; Major Professor: Dr. Lambert Kanga.
- **Nathan J. Herrick** – Biological Science Lab Technician, USDA, ARS, CMAVE / FAMU-CESTA, CBC; Project: Biological control of weeds; Supervisor: Dr. Stephen Hight.
- **Karen Ingram** – Ph.D. Student, University of Florida-FAMU, Cooperative Ph. D program; Project: *Steinernema* and *Heterohabditis* species as potential biological control agents of *Cactoblastis cactorum* Berg; Surveys for indigenous entomopathogenic nematodes along north Florida coasts; Co-Major Professors: Dr. Stephen Hight and Dr. Kenneth A. Bloem
- **Dr. Todd Jackson** – Post Doctoral Research Associate, USDA, ARS, CMAVE / FAMU-CESTA, CBC. Todd comes to us by way of Vanderbilt University. After finishing his dissertation on wasp-spider interactions on islands in the Gulf of California, Todd spent a semester teaching zoology at Vanderbilt. Currently, under Dr. Stuart Reitz laboratory, Todd is investigating the movement of thrips species between tomato and pepper plants. Other research includes modeling thrips population dynamics in a field setting. In September, Todd gave a seminar entitled "The effect of El Niño on parasitoid host interaction on islands in the Gulf of California" to scientists and staff from CBC, FAMU, and UF.
- **Dr. Lambert Kanga** – Associate Professor, FAMU-CESTA. This spring semester, Dr. Kanga is teaching two courses, "Insect, Man and Environment" and "Principles of Environmental Entomology". Previously, Dr. Kanga worked at the USDA-ARS Beneficial Insect Research Unit in Weslaco, Texas, where he pioneered the use of fungal pathogens to control *Varroa* mite, a serious pest of honey bees. Dr. Kanga is an active member of several professional organizations and has published over 50 scientific papers. Dr. Kanga's favorite sports are soccer and volleyball.
- **Mohamed K. F. Soumare, M. Sc.** – FAMU-CESTA, CBC Technician; Project: Ecology of the generalist predator *Podisus maculiventris*; Supervisor: Dr. Jesusa C. Legaspi.

Training Workshops

- Herrick, N. J. SAS Programming Essentials: I. SAS Institute Inc., Cary, N.C., September 5-10, 2003
- Herrick, N. J. Statistics I: Introduction to ANOVA, Regression, and Logistic Regression. SAS Institute Inc., Orlando, FL, September 17-19, 2003.

Center for Biological Control Hosts a 3-Day Regional Training Course

A three day training course on the invasive moth *Cactoblastis cactorum* was offered at the USDA-ARS-CMAVE Summit East location from 18-20 November, 2003. The course was financially sponsored by the International Atomic Energy Agency and organized by Drs. Stephanie Bloem, Ken Bloem, Jim Carpenter, and Stephen Hight. Nine participants from Latin America, eight from Mexico and one from the Dominican Republic, attended the course. Lectures were given on the history, life-cycle, seasonal phenology, trapping and control options for this pest. Laboratory practicums were held to teach identification of the different life stages and show various host plants of this insect. Two field trips were made during the course, one to St. Marks National Wildlife Refuge south of Tallahassee, FL, and one to the USDA-ARS-CPMRU laboratory in Tifton, Georgia. The participants were able to observe, first hand, the devastation to both native and naturalized cactus plants caused by this insect as well as view some of the ongoing field and laboratory research being conducted to better understand this invasive insect in Florida and Georgia. The information gained is especially valuable to our Mexican colleagues as they are very concerned about this invasive pest and the effect it will have on the many endemic *Opuntia* cacti in Mexico as well as to commercial cactus plantations that produce fruit and pads as vegetables throughout Mexico.



Lecturers and participants of the *Cactoblastis cactorum* training course. Left to right back Dr. James E. Carpenter, Dr. Kenneth A. Bloem, and Dr. Stephen Hight; left to right middle: Juan Carlos González, Arturo Bello-Rivera, Manuel González-Carvajal, Juan Carlos González, Joel Eugenio Romero-Saldaña; left to right front: Dr. Stephanie Bloem, Sesar Arcenio Rodríguez-Alvarez, Hugo Cesar Arredondo-Bernal, Hector Enrique Vega-Ortiz, and Santiago Vergara-Pineda.

Student Programs

During the summer and throughout 2003, the following FAMU students participated in summer internships and mentoring programs at the CBC:

- **Elizabeth Aninakwa** – Major: Pharmacy; Project: Testing presence of oviposition deterrence by *Chrysoperla rufilabris* (Neuroptera: Chrysopidae) against the silverleaf whitefly *Bemisia argentifolii* (Homoptera: Aleyrodidae), oral presentation at ARS summer intern/apprentice seminars USDA-ARS-CMAVE, Gainesville, FL, August 8, 2003; Mentor: Dr. Jesusa C. Legaspi (USDA-ARS-CMAVE summer intern/apprentice program).
- **Melany Combs** – Major: Biology; Project: Collecting cabbage leaf samples data for determining the interactions between natural enemies of the diamondback moth, *Plutella xylostella* (Lepidoptera: Plutellidae); Mentors: Nathan J. Herrick and Dr. Stuart R. Reitz (Sustainable Agriculture Research & Education program)
- **Carla Evans** – Major: Landscape Design; Project: Monitoring distribution of the cactus moth, *Cactoblastis cactorum* in Florida; Mentor: Dr. Stephen Hight (USDA-ARS student temporary employment program)
- **BJ Franklin** – Major: Entomology; Project: Biological control of thrips and chemical ecology of

the yellow margin leaf-beetle, *Microtheca ochroloma*; Mentor: Dr. Stuart R. Reitz (USDA-APHIS undergraduate student career development program)

- **Jeffory Head** – Major: Entomology; Project: Comparison of field-collected and laboratory populations of generalist predator, *Podisus maculiventris*; Mentor: Dr. Jesusa C. Legaspi (USDA-ARS Student Career Experience Program)
- **Jontae Jackson** – Major: Food Science; Project: Surveying, rearing and maintenance of the cactus moth *Cactoblastis cactorum*; Mentor: Dr. Stephen Hight (USDA-APHIS undergraduate student career development program)
- **John Mass** – Major: Food Science; Project: Monitoring distribution of the cactus moth, *Cactoblastis cactorum* in Florida; Mentor: Dr. Stephen Hight (USDA-ARS student temporary employment program)
- **Ricardo Smith** – Major: Plant Science; Project: Biological control of thrips and chemical ecology of the yellow margin leaf-beetle, *Microtheca ochroloma*; Mentor: Dr. Stuart R. Reitz (USDA-APHIS undergraduate student career development program)
- **Travis Watkins** – Major: Ag. Business; Project: Biological control of silverleaf whitefly; Mentor: Dr. Jesusa C. Legaspi (USDA-ARS/FAMU Research Service Acquisitions)



Left to right: Dr. Peter Teal, Acting USDA-ARS-CMAVE Center Director and FAMU student Elizabeth Aninakwa during the ARS summer intern/apprentice seminar at the USDA-ARS-CMAVE facility in Gainesville, FL.



Second-year FAMU student Ricardo Smith identifies species of *Frankliniella* thrips

Grants

- **Cuda, J., S.D. Hight, & J. Epler (Co-PI's)**. Monitoring the establishment, distribution, and impact of two biological control agents on *Hydrilla verticillata* in the Wacissa River watershed. Florida Dept. Environmental Protection, \$18,353.
- **Funderburk, J., S. R. Reitz, & D. Boucias (Co-PI's)**. Compatibility of UV-Reflective Mulch with Natural Enemies on Solanaceous Crops. USDAT-STAR, \$148,788
- **Wheeler, G.S., S.D. Hight, & J. Goolsby (Co-PI's)**. Biological control of *Hydrilla* in Florida. Florida Dept. Environmental Protection, \$30,000.

Student Research Thesis Topics and Others

The following are M. S. Students at CBC:

- **Nathan J. Herrick** – Project: Synthetic guild analysis of *Podisus maculiventris* (Say) (Heteroptera: Pentatomidae) and *Cotesia plutellae* (Kurdjumov) (Hymenoptera: Braconidae): Their effects on *Plutella xylostella* (Linnaeus) (Lepidoptera: Plutellidae) populations in cabbage; Major Professor: Dr. Stuart R. Reitz. Nathan Herrick participated in M. S. graduate student oral presentations at the annual ESA meeting, Cleveland, OH, October 27, 2003.
- **Shambhu P. Katel** – Project: Economic impact study and natural enemies of *Salvinia minima* Baker around Tallahassee, FL; Major Professor: Dr. Stephen Hight.
- **Stephen Mclean** – Project: Developmental biology of *Cactoblastis cactorum*; Major Professor: Dr. Kenneth A. Bloem. Stephen McLean, participated in 9-day student internship program in Jamaica through the CESTA-International Programs and USDA, ARS, Foreign Agricultural Service, May 2003
- **Oulimanthe Paraiso** – Project: Identification of pathogenicity-related compounds of Pierce's Disease; Co-Major Professors: Dr. Kenneth A. Bloem and Dr. Jiang Lu



Researchers, staff and FAMU students that participated in student programs with USDA-ARS. Left to right back: Ignacio Baez, Mohamed K. F. Soumare, Dr. Stephen Hight, Travis Watkins, John Mass, and Jeffory Head; left to right front: Dr. Jesusa C. Legaspi, Dr. Stephanie Bloem, Elizabeth Aninakwa, Carla Evans, and Jontae Jackson.



Left to right: Nathan Herrick, Jontae Jackson, Dr. Ken Bloem, and Stephen Mclean putting together traps for an experiment on the invasive cactus moth, *Cactoblastis cactorum*.



Masters graduate student Nathan Herrick examines cabbage leaves for evidence of damage by diamondback moth larvae.



Masters graduate student Stephen Mclean installing temperature data loggers in his experiment cages at St. Marks National Wildlife Refuge, FL.



USDA-ARS-CMAVE technicians, Marcus Edwards (front) and Kristen Bowers (back) preparing a tomato experimental plot at the Viticulture Center research site, Tallahassee, Florida. Fall 2003.



Dr. Jesusa C. Legaspi (right) explaining to small farmers an experiment with hot peppers during the 2003 Annual Small Farm Field Day at the FAMU-CESTA Research and Extension Center, Quincy, FL.

Dr. Stuart Reitz Laboratory Update

Thrips of the genus *Frankliniella* attack a wide variety of crops grown in the Florida Panhandle and are serious pests to farmers in this region. Thrips damage crops both by directly feeding on fruit tissue as well as vectoring plant viruses. For several years, the Reitz lab in collaboration with Dr. Joe Funderburk of the University of Florida (North Florida Research and Education Center, Quincy, FL), has collected information on distribution and abundance of the four most common thrips species, thrips predators, and appearance of tomato spotted wilt virus (TSWV),

a plant disease vectored by thrips. The next step was to carry out a mark-recapture study to establish how thrips move within an agricultural setting. During the fall 2003 field season, western flower thrips (*Frankliniella occidentalis*) were marked using an immunoprotein marker and released into experimental tomato and bell pepper plots. Analysis using ELISA (enzyme-linked immunosorbent assay) methods to detect the marker provides information about the spatial and temporal scale over which thrips movement takes place. Results should be available this spring. Ultimately this research will help develop models of thrips population dynamics.

Demonstrating Integrated Pest Management of Hot Peppers

This is a collaborative research effort between Dr. Jesusa C. Legaspi (ARS, CMAVE/FAMU-CBC), Dr. Cassel Gardner and Gilbert Queeley (Cooperative Extension Service-FAMU) and Drs. Norman Leppla and Jim Cuda (University of Florida, Gainesville). The objective of the project is to demonstrate the use of integrated pest management techniques in hot peppers to resource-limited producers in north Florida. Hot peppers is increasingly becoming a viable niche market for small farmers. A profitable income of \$4,000-20,000 per acre was reported by growers in 2000. Test plots using two varieties, 'scotchbonnet' and 'caribbean red' were set up at the FAMU Research and Extension Center, Quincy, FL in summer 2003. The IPM treat-

ments included use of organic nutrients such as poultry manure and mushroom compost while grower's practice treatment and the control included use of chemical fertilizers. We found that low populations of the common pests such as whiteflies and thrips did not warrant use of chemical insecticides or augmentation of biological control agents. More vigorous plant growth was found in the test plots treated with organic nutrients compared to those applied with chemical fertilizers. Results of this research was demonstrated to over 200 participants during the Annual Small Farm Field Day held in September 2003 at FAMU Research and Extension Center. This collaborative research was funded in part by the joint FAMU/UF-IFAS Center for Cooperative Agricultural Programs.

Publications

- Baptiste, S. J., K. Bloem, S. Reitz, & R. Mizell, III. 2003. Use of radiation to sterilize two-spotted spider mite (*Avari: Tetranychidae*) eggs used as a food source for predatory mites. *Fla. Entomol.* 86: 389-394.
- Bloem, S., J.E. Carpenter, & J.H. Hofmeyr. 2003. Radiation biology and inherited sterility in false codling moth (*Lepidoptera: Tortricidae*). *J. Econ. Entomol.* 96: 1724-1731.
- Bloem, S., J.E. Carpenter, & K.A. Bloem. 2003. Performance of sterile *Cactoblastis cactorum* (*Lepidoptera: Pyralidae*) females in luring males to traps. *Fla. Entomol.* 86: 395-399.
- Carpenter, J.E. & S. Bloem. 2003. Performance of natural enemies reared on artificial diets, pp. 143-149. *Proceedings of 1st International Symposium on Biological Control of Arthropods, Honolulu, HI, 2002.*
- Hansen, E. A., J. E. Funderburk, S. R. Reitz, J. Eger, S. Ramachandran, & H. J. McAuslane. 2003. Within plant distribution of *Frankliniella* thrips and *Orius insidiosus* on field pepper. *Environ. Entomol.* 35: 1035-1044.
- Haseeb, M., T.-X. Liu & W.A. Jones. 2004. Effects of selected insecticides on *Cotesia plutellae*, endoparasitoid of *Plutella xylostella*. *BioControl* 49: 33-46.
- Head, J. 2003. Study of weight differences in *Podisus maculiventris* collected in field versus laboratory. P. 36. *Proceedings of 13th Biennial Research Symposium, Association of Research Directors, Inc., Atlanta, GA, March 29-April 2, 2003.*
- Hight, S.D. 2002. Host specificity and risk assessment of *Heteroperreyia hubrichi*, a potential classical biological control agent of Christmasberry (*Schinus terebinthifolius*) in Hawaii. Pp. 30-44. *In C.W. Smith, J. Denslow, & S.D. Hight (eds.). Biological Control of Invasive Plants in Native Hawaiian Ecosystems, June 2000, Honolulu, HI. University of Hawaii, Honolulu.*

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Publications (continued from Page 4)

- Hight, S.D., S. Bloem, K.A. Bloem, & J.E. Carpenter. 2003. *Cactoblastis cactorum* (Lepidoptera: Pyralidae): observations of courtship and mating behaviors at two locations on the Gulf Coast of Florida. Fla. Entomol. 86: 400-408.
- Hight, S.D., I. Horiuchi, M.D. Vitorino, C. Wikler, & J.H. Pedrosa. 2003. Risk assessment of a Brazilian sawfly, *Heteroperreyia hubrichi*, as a biological control agent of Christmasberry in Hawaii. BioControl 48: 461-476.
- Lorenzo, A.B., Legaspi, J., Baez, I., Pescador, M. 2003. Assessing the effects of alternative landscape design and management on insect diversity in Tallahassee-Leon County, Florida. pp. 166-167, Proceedings of the Thirteenth Biennial Research Symposium, Association of Research Directors, Inc., Atlanta, GA, April 29-March 2, 2003.
- Meagher, R. L., Jr. & J. C. Legaspi. 2003. Within-field distribution of three homopteran species in Texas sugarcane. Southwestern Entomologist. 28: 1-10.
- Reitz, S. R., E. L. Yearby, J. E. Funderburk, J. Stavisky, S. M. Olson, & M. T. Momol. 2003. Integrated management tactics for *Frankliniella* thrips (Thysanoptera: Thripidae) in field-grown pepper. J. Econ. Entomol. 96: 1201-1214.
- Setamou, M., Bernal, J. S., Legaspi, J.C., & Mirkov, T.E. 2002. Parasitism and location of sugarcane borer (Lepidoptera: Pyralidae) by *Cotesia flavipes* (Hymenoptera: Braconidae) on transgenic and conventional sugarcane. Environ. Entomol. 31: 1219-1225.
- Smith, C. W., J. Denslow, & S.D. Hight (eds.). 2002. Biological Control of Invasive Plants in Native Hawaiian Ecosystems, June 2000, Honolulu, HI. University of Hawaii, Honolulu.
-
- Invited Presentations**
- Bloem, S. Organizer and Lecturer for a three day International Training Course on the invasive moth *Cactoblastis cactorum* sponsored by the International Atomic Energy Agency (IAEA) in Tallahassee, FL. November 18-20, 2003.
- Bloem, S. Consultant to South Africa for the IAEA to assess the feasibility of initiating area-wide control programs for the codling moth, *Cydia pomonella*, and false codling moth, *Cryptophlebia leucotreta* (Lepidoptera: Tortricidae), based on SIT/inherited sterility. February & October 2003.
- Bloem, S. Consultant to Algeria for the IAEA, to assess the feasibility of initiating an area-wide control program for the date moth, *Ectomyelois ceratoniae* (Lepidoptera: Pyralidae), based on SIT/inherited sterility. September 2003
- Bloem, S & K. Bloem. Invited speaker at the Fall Armyworm Symposium, Florida Entomological Society Annual Meeting "Area-wide control program for codling moth in British Columbia, Canada: Implications for area-wide control of the fall armyworm". July 2003.
- Bloem, S. Invited lecturer to the Universidad Nacional del Comahue in Neuquén, Argentina, to present a three day Short Course on area-wide pest management for codling moth to Professional Entomologists and Master's Level University Students. March 2003.
- Hight, S.D. The biological control of Brazilian pepper (*Schinus terebinthifolius*) in the USA. Plant Protection Research Institute, Pretoria, South Africa. March 19, 2003.
- Hight, S.D. Exploration for natural enemies. Lecture to FAMU graduate class entitled Principles of Biological Control. September 29, 2003.
- Hight, S.D. Biology and identification of *Cactoblastis cactorum* and research efforts on this moth in the USA. Nieu Bethesda Regional Farmers Association Annual Year-End Meeting, Nieu Bethesda, South Africa. November 4, 2003.
- Hight, S.D. K.A. Bloem, S. Bloem, & J.A. Carpenter. Present and future actions against *Cactoblastis cactorum* in North America. Florida Entomol. Soc. Annual Meeting, Hutchinson Island, FL, July 28-30, 2003.
- Hight, S.D. & J.A. Carpenter. Detection techniques for *Cactoblastis cactorum*. Cactus Moth, *Cactoblastis cactorum*, Planning Meeting, Miami, FL, 9-10 December 2003.
- Legaspi, J.C. "Biocontrol of silverleaf whitefly" and "Biotechnology and Integrated Pest Management", Principles of Biological Control class (Entomology 6215), Florida A&M University, Tallahassee, FL, October 22 and November 14, 2003
- Legaspi, J. C. "Sugarcane Biotechnology and Integrated Pest Management", Introductory Biotechnology class (AGG 2050), Florida A&M University, Tallahassee, FL, November 24, 2003.
- Legaspi, J. C. Opening remarks for "Celebrating Women in Agriculture", an event in recognition of Women's History Month and National Agriculture Week, Florida A&M University, Tallahassee, FL, March 19, 2003.
- Legaspi, J. C., S. Reitz, R. Nguyen & D. Schuster. "Biological Control of silverleaf whitefly, *Bemisia argentifolii* (Homoptera) in Florida", Vegetable Insect Symposium, Southeastern Branch, Entomol. Soc. Am., Baton Rouge, LA, March 9-12, 2003.
- Reitz, S. Behavioral Ecology of Thrips: Implications for Implications for the Management of Thrips and Tospoviruses. Dept. Entomology, Montana State University, April 2003.
- Reitz, S. Introduction to the Biological Control of Weeds, and Their Value in Teaching. Dept. Entomology, Montana State University, April 2003.
- Reitz, S. An Introduction to Biological Control, Florida A&M University RATLR Program, June 2003.



USDA Under Secretary Bill Hawks addressing the attendees at the Tropical Soda Apple Biocontrol Release Program, 14 May 2003, on a ranch outside of Lakeland in Central Florida. A media briefing was organized by Florida Department of Agriculture & Consumer Services to launch the cooperative program between the Florida Agriculture Department, USDA-ARS, and University of Florida. Following the program overview, a biological control agent, the South American leaf-feeding beetle (*Gratiana boliviana*), was released for the first time in North America into field cages infested with tropical soda apple.

Public Outreach

- February 6-17, 2003. Through J. Shapiro, USDA-ARS-CMAVE. International Science Fair, Tampa, FL.
- February 18, 2003. CBC Staff. CESTA Career Forum, FAMU, Tallahassee, FL.
- May 2003. Edwards, M. Tour of FAMU-Viticulture Center research field for elementary school students, Tallahassee, FL
- May 12, 2003. Hight, S. & N. Herrick. Tropical Soda Apple Biocontrol Release Program. Lakeland, FL.
- May 13, 2003. J. Head & J. Peters. 4th grade students, Bond Elementary School, through 4H program of Leon County Extension Service, Tallahassee, FL.
- June 2003 Reitz, S. Demonstration tour of research field, North Florida Horticultural Field Day, University of Florida North Florida Research & Education Center, Quincy, FL.
- June 25-26 & July 15, 2003. Reitz, S., K. Bowers, J. C. Legaspi, I. Baez, J. Head, E. Aninakwa, & T. Watkins. RATLR program (Raising Agricultural and Technologically Literate Rattlers), CESTA, Florida A&M University, Tallahassee, FL.
- August 29, 2003. Reitz, S., M. Edwards, J. C. Legaspi, J. Head, S. Hight, & I. Baez. Annual Grape Field Day, Center for Viticulture & Small Fruit Research, CESTA, Florida A&M University, Tallahassee, FL.
- September 12, 2003. Legaspi, J. C. Plant Science and Small Farm Advisory Committee meeting, UF/FAMU Cooperative Extension Service, Quincy, FL.
- September 18, 2003. Legaspi, J. C., I. Baez, M. Soumare, J. Head, C. Gardner, & G. Queeley. Annual Small Farm Field Day, Research & Extension Center, CESTA, Florida A&M University, Quincy, FL.
- October 14-16, 2003. Marshall, B. 26th Annual Sunbelt Agriculture Expo, Moultrie, GA.
- October 18, 2003. Baez, I., J. Head, & M. Combs. Monarch Festival, St. Marks National Wildlife Refuge, FL.
- November 19, 2003. Head, J. Career Day - Workforce Plus, Tallahassee, FL.
- December 9-10, 2003. Hight, S., S. Bloem, K. Bloem, J. Carpenter, N. Herrick. Cactus moth *Cactoblastis cactorum* Planning Meeting. Miami, FL.



USDA-ARS-CMAVE-CBC technician Ignacio Baez demonstrating the importance of natural enemies to control pest insects during the 2003 Annual Monarch Festival held at the St. Marks National Wildlife Refuge, FL.



USDA-ARS-CMAVE-CBC technician Kristen Bowers explaining to participants in the RATLR (Raising Agriculturally and Technologically Literate Rattlers) summer camp about ongoing research on thrips at FAMU.



Dr. Jesusa C. Legaspi explaining to visitors the different lines of research that USDA-ARS-CMAVE-CBC has at FAMU during the 2003 Annual Grape Field day, hosted by the FAMU-CESTA, Center for Viticulture and Small Fruit Research.

Presentations

- Avila, J. M., J. Stavisky, S. J. Hague, J. E. Funderburk, S. R. Reitz, & M. T. Momol. Transmission of tomato spotted wilt virus by *Frankliniella occidentalis* vs. *Frankliniella bispinosa* as influenced by predation of *Orius insidiosus*. Southeastern Branch, Entomol. Soc. Am., Baton Rouge, LA, March 9-12, 2003 (Talk).
- Bartlett, C., L. O'Brien, & T. Erwin. Preliminary analysis of planthopper (Hemiptera: Fulgoroidea) diversity from the Ecuadorian rainforest canopy. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Talk).
- Bloem, K. A. & S. Joseph. Use of radiation to sterilize two-spotted spider mite (Acari: Tetranychidae) eggs used as a food source for predatory mites.

Evaluating the Use of Nuclear Techniques for the Colonization and Production of Natural Enemies of Agricultural Insect Pests, Third Research Co-ordination Meeting, FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, Vienna, Austria, November 3-7, 2003 (Talk)

Bloem, S. & J. E. Carpenter. Instruction on individual project plans and editors comments on preparation of manuscripts for publications. Evaluating the Use of Nuclear Techniques for the Colonization and Production of Natural Enemies of Agricultural Insect Pests, Third Research Co-ordination Meeting, FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, Vienna, Austria, November 3-7, 2003 (Talk)

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Presentations (continued from Page 6)

- Bloem, S., J. E. Carpenter, & J. H. Hofmeyr. Radiation biology and inherited sterility in the false codling moth *Cryptophlebia leucotreta* (Lepidoptera: Tortricidae). Florida Entomol. Soc. Annual Meeting, Hutchinson Island, FL, July 28-30, 2003 (Poster).
- Bloem, S., J.E. Carpenter, & J.H. Hofmeyr. Radiation biology and inherited sterility in the false codling moth (Lepidoptera: Tortricidae): Implications for developing control tactics. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Poster).
- Bloem, K.A., S. Bloem, J.E. Carpenter, S.D. Hight & N. J. Herrick. Advances for monitoring the invasive moth *Cactoblastis cactorum*. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Poster).
- Carpenter, J. E., K. A. Bloem & S. Bloem. Inherited sterility in *Cactoblastis cactorum* (Lepidoptera: Pyralidae) and its role in risk assessment of biological control agents of weeds. Evaluating the Use of Nuclear Techniques for the Colonization and Production of Natural Enemies of Agricultural Insect Pests, Third Research Co-ordination Meeting, FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, Vienna, Austria, November 3-7, 2003 (Talk).
- Carpenter, J.E., S. Bloem & J.H. Hofmeyr. Acceptability and suitability of eggs of false codling moth (Lepidoptera: Tortricidae) from irradiated parents to parasitism by *Trichogrammatoidea cryptophlebiae* (Hymenoptera: Trichogrammatidae). Florida Entomol. Soc. Annual Meeting, Hutchinson Island, FL, July 28-30, 2003 and Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Poster).
- Head, J. 2003. Study of weight differences in *Podisus maculiventris* collected in field versus laboratory. Second Research Forum, CESTA, FAMU, Tallahassee, FL., March 20, 2003; Bernard D. Hendricks Undergraduates Honors Conference, FAMU, Tallahassee, FL, March 25-26, 2003; Meeting of Minorities in Agriculture and Natural Resources and Related Sciences, and 13th Biennial Research Symposium, Association of Research Directors, Inc., Atlanta, GA, March 29-April 2, 2003 (Talk).
- Herrick, N. J. & S. Reitz. Prey preference of *Podisus maculiventris* (Heteroptera: Pentatomidae) for larvae parasitized by *Cotesia plutellae* (Hymenoptera: Braconidae) and unparasitized *Plutella xylostella* (Lepidoptera: Plutellidae) larvae. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Talk).
- Hight, S.D. Biological control of weeds program at the USDA-ARS-CMAVE in Tallahassee, FL. Florida Weed Biocontrol Research Retreat, Archbold Biological Station, Lake Placid, FL, October 7-8, 2003. (Talk).
- Hight, S.D., R.W. Pemberton, K.A. Bloem, S. Bloem, & J.E. Carpenter. Our changing perception of *Cactoblastis cactorum* in North America: From beauty to beast ... from savior to sinner ... from biological control agent to invasive pest. XI International Symposium on the Biological Control of Weeds, Canberra, Australia, April 27-May 2, 2003 (Poster).
- Hight, S.D., R.W. Pemberton, P. Conant, & T. Johnson. Attack on and use of a native Hawaiian plant by the biological control agent *Teleonemia scrupulosa* introduced against *Lantana camara*. XI International Symposium on the Biological Control of Weeds, Canberra, Australia, April 27-May 2, 2003 (Poster).
- Legaspi, J. C. Selected life history traits of the spined soldier bug, *Podisus maculiventris* (Heteroptera: Pentatomidae), Insects Discussion Group, USDA, ARS, CMAVE, Gainesville, FL, August 19, 2003 (Talk).
- Legaspi, J. C. & I. Baez. Predation rate, prey preference and reproduction of a generalist predator, *Podisus maculiventris* (Heteroptera: Pentatomidae), Second Research Forum, CESTA, FAMU, Tallahassee, FL, March 20, 2003 (Poster).
- Legaspi, J. C. & J. Shapiro. Selected life history traits of *Podisus maculiventris* (Heteroptera: Pentatomidae) provided different prey species. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Poster).
- Legaspi, J. C., S. Reitz, R. Nguyen, & D. Schuster. Biological control of silverleaf whitefly, *Bemisia argentifolii* (Homoptera), in Florida. Southeastern Branch, Entomol. Soc. Am., Baton Rouge, LA, March 9-12, 2003 (Talk).
- Lorenzo, A. B., J. C. Legaspi, I. Baez & M. Pescador. Assessing the effects of alternative landscape design and management on insect diversity in Tallahassee-Leon County, Florida. 13th Biennial Research Symposium, Association of Research Directors, Inc., Atlanta, GA, March 29-April 2, 2003 (Poster).
- Lorenzo, A. B., J. C. Legaspi, M. Pescador, J. Muchovej & E. R. Duke. Alternative landscape design and management influences and insect diversity in residential landscapes. Annual Meeting of the Florida State Horticultural Society, Orlando, FL, June 7-9, 2003 (Talk).
- McLean, S., K.A. Bloem, J.E. Carpenter, S.D. Hight & S. Bloem The effect of temperature on egg hatch of the cactus moth, *Cactoblastis cactorum* (Lepidoptera: Pyralidae). Florida Entomol. Soc. Annual Meeting, Hutchinson Island, FL, July 28-30, 2003 (Poster).
- O'Brien, C. W. & M. Haseeb. *Pachnaeus*, citrus root weevils, beautiful but squash them anyway. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Poster).
- O'Brien, C.W., & M. Haseeb. 2003. *Mylocerus*, your next worst enemy! *Diaprepes* Task Force Scientific Meeting, Lake Alfred, FL, April 1-2, 2003 (Poster).
- Reitz, S., J. Stavisky, B. Brodbeck, P. Andersen, J. Funderburk, S. Olson, & K. Bowers. Populations of flower thrips and the predator *Orius insidiosus* in different varieties of peppers. Entomol. Soc. Am. National Meeting, Cincinnati, OH, October 26-29, 2003 (Poster).

Dr. Charles W. O'Brien Retires from Florida A&M University

Dr. Charles W. O'Brien announced his retirement after a long and illustrious career. His 30 year career at FAMU were celebrated at a CESTA organized retirement banquet held on May 23, 2003. In reality, however, Dr. O'Brien has retired only from his full time faculty position with FAMU and will continue his meaningful work and research on his life-long passion in weevil taxonomy. Dr. O'Brien officially began his entomological career in college when he received a B.A. in Entomology from the University of Connecticut at Storrs (1956). He went on to obtain a M.S. in Entomology at the University of Arizona at Tucson in 1958. He began pursuing his Ph.D. at the University of California, Berkeley, in 1958 but delayed his academic studies when he was hired as a field entomologist with the B.P. Bishop Museum, Honolulu, in 1959. It was during his work with the Bishop Museum that Dr. O'Brien was acknowledged for his research in Antarctica by receiving the prestigious Congressional Medal for Antarctic Service. Following 5 months of research in Antarctica, he went to the foggy and rainy Southern Alps of New Zealand, traveling to the northern tip of the North Island. He then traveled by way of Australia and Papua New Guinea to the British Solomon Islands Protectorate to carry out mini-explorations with Melanesian guides, living for 6 months in native villages in the mountains of five different islands. Dr. O'Brien returned to his Ph.D. program in 1960 at University of California, Berkeley and graduated with a degree in Entomology in 1967. Dr. O'Brien began his professional academic career as a Purdue Research Fellow at the Catholic University of Chile in Santiago (1967-1969) and then Texas Tech University, Lubbock, as Assistant Professor (1970-1972). He came to Tallahassee, Florida in 1972 as Associate Professor in Entomology at FAMU. Dr. O'Brien was

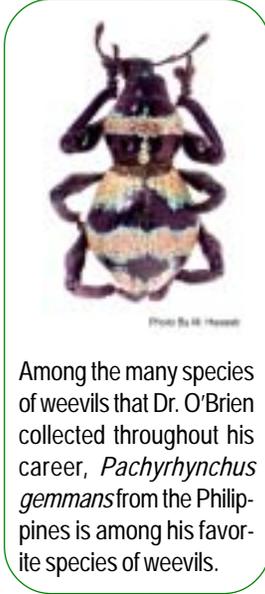


Dr. Charles W. O'Brien

promoted to full Professor in 1979 and remained at FAMU until he retired in December 2003. He was the first Director of the joint FAMU-USDA CBC from 1999-2003. Dr. O'Brien taught FAMU courses in General Entomology, Insect Morphology, Medical Entomology, and Biological Control. Dr. O'Brien has been responsible in whole or in part for grants to FAMU totaling nearly \$5 Million during his tenure on the faculty. He continues to produce scientific publications and to date has published more than 120 journal articles and book chapters



Dr. Charles W. O'Brien visiting Academia Sinica, the National Collection in Beijing, China, 1992



Among the many species of weevils that Dr. O'Brien collected throughout his career, *Pachyrhynchus gemmans* from the Philippines is among his favorite species of weevils.

Dr. O'Brien is an internationally known and respected Entomologist. He has traveled extensively throughout the U.S., Europe, Asia, Central and South America, the Caribbean, and Africa to study, teach, conduct research, present research findings, and serve as a consultant. Dr. O'Brien is an avid insect collector and through his travels and tireless efforts has created one of the world's most substantial collections of weevils. His collection consists of more than one million weevil specimens that represent thousands of species. The numbers in his collection change almost daily with his continuous diligence to prepare and identify an unending supply of specimens. Dr. O'Brien has been married for 42 years to Lois (Breimeier), who is also a Berkeley Ph.D. Entomology graduate. Dr. Lois O'Brien is an acknowledged taxonomist of Fulgoroidea, a homopteran superfamily collectively known as planthoppers. The O'Brien's will be leaving Tallahassee and moving to Arizona in November, where they will continue their world travels and entomological research.

Faculty Position Available

Associate Professor / Professor of Insect Taxonomy, and Director of the Center for Biological Control, CESTA, Florida A&M University, Tallahassee, FL. Twelve-month tenure-track position. 75% Research, 25 % Administration. Ph.D. in Entomology, or related disciplines; expertise in taxonomy of insect taxa important to biological control. Send letter of interest, curriculum vitae, statement of professional goals, college transcripts and 3 letters of recommendation to: Ms. Carrie Gavin, Office of Equal Opportunity Programs, Ardelia Court, Unit 5, Florida A&M University, Tallahassee, FL 32307; phone: (850) 599-3076. Application deadline: Open until filled. College contact for detailed job description: Dr. S. Pancholy, e-mail: s.pancholy@fam.u.edu, phone: (850) 599-3594.

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