

Department of *Entomology* NEWS

Fall 2007

From the Department Head

This newsletter focuses on the many activities and accomplishments of the last four years. Extension Entomology merged with the Academic Department in July 2002. Since then, we have made major strides in integrating activities in all departmental program areas and demonstrating their importance to the citizens of Louisiana and the U.S.



Tim Schowalter

Hurricanes Katrina and Rita during 2005 brought disruption and loss to southern Louisiana, but also brought out exemplary leadership from our department. We advised the state on quarantine and treatment of organic debris in New Orleans. We accommodated displaced members of our French Quarter Formosan Subterranean Termite Control program as well as a displaced professor from Tulane. We advised public health officials on control of mosquitoes and nuisance flies in flooded areas. Departmental faculty and staff organized the animal shelter for abandoned pets rescued from New Orleans and later developed a program to suppress surviving red imported fire ant colonies on higher ground in the New Orleans area. Several programs are addressing crop pest management or biodiversity issues arising from saltwater surge and forest canopy disturbance.

While we continue to face challenges, we have much to celebrate.

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Henderson Makes Wall Street Journal Front Page

Dr. Gregg Henderson inspecting the remains of a large water oak snapped in half by Hurricane Katrina. The tree is within 30 feet of the London Avenue floodwall in the background and contains a large Formosan subterranean termite carton. Termite control along these levees and floodwalls are desperately needed to reduce soil erosion and wall collapses. Vetiver grass holds promise in this area.

Gregg Henderson's work with vetiver grass as a termite repellent and levee protectant was featured on the front page in the August 22, 2007, Wall Street Journal. Dr. Henderson has shown that vetiver grass produces chemicals, especially nootkatone, that repel termites in both leaves and roots.

Vetiver's rapid growth and massive root system could reduce erosion and protect levees with organic fill that has supported large colonies of termites. Vetiver is among the short list of species being considered by the U.S. Army Corps of Engineers for levee protection in southern Louisiana.

Post-hurricane Recovery

Following hurricanes Katrina and Rita in 2005, insects featured prominently in recovery efforts, and department expertise was solicited to address these issues. Entomology programs contributed substantially to suppression of fire ants, termites and filth flies that interfered with cleanup and restoration activities.

Although fire ants are known for their ability to form balls and disperse with floodwater, salt water was found to restrict ball formation, and fire ants were virtually eliminated from flooded areas of southern Louisiana. Remnant

colonies persisted only on elevated areas, such as levees that were not flooded. This unique situation offered the opportunity to delay recolonization by fire ants during the recovery process. Linda Hooper-Búi and her research team, with assistance from Dale Pollet, led an effort to spread fire ant bait throughout Orleans and St. Bernard parishes, using Esteem, a growth regulator donated by Valent Corp. With assistance from the New Orleans Mosquito and Termite Control Board (NOMTCB), they treated nearly 2,500 acres of public lands

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Departmental Activities

Post-hurricane Recovery

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and green space during May and June 2006. Additional donations of Amdro, a bait from Excel, and Over 'n Out, a contact insecticide from GardenTech, were distributed by the NOMTCB to returning residents and neighborhood associations for area-wide treatment in the two parishes.

Fire ants were suppressed for more than six months, but eventually started

suppression of Formosan subterranean termites in the historic French Quarter. New sonic and infrared equipment is being tested for detection of colonies that are missed by traditional visual inspection, such as above-ground colonies in shared walls. Local pest management companies are contracted to provide treatments to property owners and the effectiveness of various methods can be compared. Property owners also are contracted to provide access for inspection and feedback on the program.

Ring and Morgan quickly reestablished termite monitoring stations and surveillance activities after the hurricanes, although resumption of treatments was delayed by the slow return of pest management personnel to the city. This program, however, currently is undergoing another expansion and has been widely supported by property owners and civic groups.

Ring, Morgan and Gregg Henderson also contributed substantially to state efforts to control movement or disposal of potentially infested debris. Ring and Henderson were interviewed by radio, TV and newspaper reporters for information on debris treatment and the potential role of termites in levee failures.

Mary Grodner and Wayne Kramer coordinated surveillance of mosquitoes by extension agents in affected parishes. Dale Pollet provided advice on control of calliphorids, phorids and other dipterans that became serious nuisances as a result of breeding in large volumes of debris, uncollected garbage and decaying food in abandoned refrigerators throughout the stricken area.

Insects also played a role in post-hurricane recovery of agricultural crops. Gene Reagan and Ph.D. student Julien Beuzelin documented increased abundances of, and damage by, the sugarcane borer in coastal sugarcane fields where fire ants were eliminated by storm surge.

These data further demonstrated the value of fire ants as biological control agents.

From the Department Head

(Continued from page 1)

The department remains robust and productive. We continue a long tradition of excellence in IPM, resistance management, urban entomology, ecology and systematics and have recruited new faculty to provide expertise in modern techniques, especially molecular biology. We are increasingly successful in bringing competitive, as well as directed, funding into the department. We continue excellence in our teaching and extension activities. Our faculty and students are distinguished and have garnered a number of prestigious awards. Faculty and student accomplishments frequently receive media attention. Despite our growing external support, crucial activities remain underfunded. Among these are support for Distinguished Lecturers and other outside speakers who augment the value of our graduate education, travel grants to permit students to attend scientific meetings, our Louisiana State Arthropod Museum and, of course, our stipends for exceptional graduate students. Louisiana State University and the LSU AgCenter are embarking on a significant capital campaign to build support for the museum, key faculty positions and graduate fellowships, but your support for these and other departmental programs are greatly appreciated.

Please contact me at 225-578-1634 or tschowalter@agcentr.lsu.edu if you have questions or suggestions, would like to visit the department or use our services or would like to support departmental programs. For your convenience, an insert is enclosed, with options for you to check if you would like to contribute to the department or update your contact information. We appreciate the support of all our donors and supporters, always enjoy hearing from you and welcome an opportunity to see you if you visit our campus.

Sincerely,



Tim Schowalter, Professor and Head



Linda Hooper-Bui (right) talks with reporters about treatment of residual fire ant colonies and efforts to prevent or delay recolonization in New Orleans during a news conference to launch the FAST Prevention program in May 2006. (Photo by Johnny Morgan)

to reestablish in treated areas, in part because large portions of the flooded urban area remained abandoned and untreated by former residents. This program and successful neighborhood programs spanning several years continue to demonstrate the value of cooperative efforts to suppress fire ants over large areas.

The departmental Formosan subterranean termite research and extension program also played an active role in post-hurricane recovery. Dennis Ring and Alan Morgan direct a major research and demonstration program, Operation Full Stop, with collaboration from USDA-ARS and NOMTCB scientists, to evaluate and demonstrate the most effective area-wide methods for

Urban Entomology

Gregg Henderson arrived at LSU in 1990, with responsibility for controlling the spread of the Formosan subterranean termite. Henderson's subsequent work exemplified the development of control strategies through a better understanding of termite biology and behavior. His willingness to listen and learn from more experienced researchers and pest managers helped prove to the pest control industry and homeowners that basic research was the best approach to developing better control strategies. Early in his career he was fortunate to receive a sizable grant from the EPA to develop baits for termites. Baits that were developed and patented from this effort are still on the market. He also patented the familiar pop-up monitors that permitted early detection of termite activity and better targeting of termite toxicants. On another front, it had long been known that Formosan termites were infesting living trees, which served as a reservoir for invasion into homes. To address this, Henderson's team developed a tree treatment process that was adopted by the La. Dept. of Agriculture and Forestry as part of a multimillion dollar effort to successfully control tree infestations, starting in 2002. The French Quarter infestation also proved to be a success story after he teamed up with the USDA to develop a pilot project to control this insect in 1996.

Although these successes were critical to accomplishing the missions of the department and the LSU AgCenter, Henderson also has found that a key to termite success is their caste system that is controlled and optimized by hormones and pheromones, especially juvenile hormone (JH). Henderson discovered how soldier termites control the JH titer of worker termites in the regulation of caste development. Colony group size also was found to have a profound effect on hormone and pheromone production in this termite species. Discovering the chemicals that attract or repel termites and that aid their foraging decision making has resulted in a large number of high-profile publications and interesting stories that he uses to illustrate the value of both careful deduction and serendipity in the classes he teaches.

Precision Agriculture

One promising technology for increasing crop yields and reducing costs is site-specific, variable rate application of agronomic inputs, being evaluated by Roger Leonard and Ralph Bagwell. Remote sensing techniques have been used to monitor spatial and temporal changes in arthropod pest populations, but the application of site-specific management tools for integrated pest management is limited.

Insect pest management currently represents one of the greatest variable expenses incurred by crop producers. Effective chemical control strategies have allowed cotton production to remain a viable economic enterprise in areas of heavy insect pest pressure. Current chemical control strategies in cotton are based on action threshold levels. When crop consultants or producers detect insect pest densities above threshold levels, an insecticide is applied to the entire field. In contrast, site-specific treatments are applied only to those areas of the field where pest abundance exceeds the threshold.

Most agricultural fields have inherent spatial variability due to soil type, nutrient availability or drainage. Intra-field variability can result in gradients in yield quantity and/or quality. Electronic yield-monitoring equipment, coupled with geographical information systems (GIS), has become an important tool in detecting and mapping intra-field

variation. Historical geo-referenced yield data from fields also can provide producers with considerable information to make future crop management decisions. Geo-referenced yield maps can delineate field zones that contribute significantly to total yield for the entire field and those zones that are not productive. Attempting to manage insect pests in non-productive areas of the field may only add to production input costs without increasing yields. By restricting insect pest management inputs to field zones that are producing profitable yields, producers should be able to manage pests more efficiently.

Biodiversity Assessment

Staff and students of the Louisiana State Arthropod Museum (LSAM) are coordinating an ambitious beetle inventory effort in Great Smoky Mountains National Park (GSMNP), Tennessee/North Carolina. This four-year project, directed by Chris Carlton and Victoria Bayless (LSAM Curator), is part of a larger effort initiated 10 years ago to conduct an All Taxa Biodiversity Inventory (ATBI) to document all organisms that occur within the park. By far, the most diverse group of organisms in the park is insects, and within insects the most diverse order is the Coleoptera, or beetles.

When Carlton became involved with the ATBI in 2001, he anticipated a total of about 700 beetle species based mainly on specimens deposited in the



Roger Leonard and Ralph Bagwell setting up equipment to test variable rate application by aircraft. (Photo by Josh Temple)



A fish-eye view of collecting activities at Purchase Knob in the Great Smoky Mountains National Park during the 2007 Beetlemania Teacher Workshop conducted by the LSAM Beetle Team. (Photo by Mike Ferro)

GSMNP museum. The current beetle count for GSMNP is 2,161 species from 103 families. Using periodic species accumulation analyses, plus independent work by cooperators, his group has documented about 1,400 new species records for the park. This includes 33 species new to science and good series of some extremely rare species. Carlton predicts that the total beetle diversity for the park will be about 3,000 species based on extrapolation of

use specialized techniques that target taxa that cannot be obtained by traditional collecting methods.

International Activities

Four members of the department – Chris Carlton, Victoria Bayless, graduate students Michael Ferro and Matthew Gimmel, and Erin Watson, a recent departmental Ph.D. graduate, traveled to Taiwan for three weeks of insect collecting during July 2006.

data for the 15 largest families in eastern North America. Current and future efforts will be focused on samples collected during organized Beetle Bioblitzes – organized events attended by many specialists using a wide variety of methods. LSAM staff and students also conduct sampling trips to the park several times a year, during which they

The group was hosted by faculty from Taiwan National University, Taiwan Forestry Research Institute and the Taiwan Academy of Sciences. This trip was one in a series of recent visits to Taiwan by members of the department to promote collaborative research projects in forest ecology and beetle biodiversity. Highlights included insect collecting trips to two Forestry Institute research stations, a behind-the-scenes tour of the Taipei Zoo Insectarium, and an afternoon symposium at Taiwan National University. Symposium presentations were given by all members of the group to a standing-room-only audience of Taiwanese students, faculty and visiting scientists. Matt Gimmel's talk was particularly memorable, as a result of a 6.2 magnitude earthquake that struck midway through his presentation. The audience was shaken, but Matt completed his presentation with outstanding poise.

During May 2007, Claudia Hus-seneder and colleague Ed Vargo (North Carolina State University) spent three weeks in eastern and southern China collecting native populations of the Formosan subterranean termite, with funding from the National Geographic Society. They traveled more than 2,500 miles by air, train, bus, taxi, rickshaw and on foot to collect 86 samples from

Departmental Programs

The Entomology Department currently focuses research and teaching programs in three areas: Integrated Agricultural Pest Management, which includes crop, forest, veterinary and biological control entomology; Urban Entomology, which includes structural and medical entomology; and Integrative Entomology, which includes systematics, physiology, toxicology, ecology and conservation biology.

The Entomology Department arguably interacts with a broader proportion of the general public than does any other department at LSU. Every citizen in Louisiana has an interest in insects, whether as commodity producer, natural resource manager, medical or veterinary provider, outdoor recreationist, homeowner or gardener. Faculty and students provide entomological presentations and training to K-12 teachers, Master Gardeners and other groups. Because of their diversity and economic and ecological importance, insects attract attention and stimulate interest in science at an early age.

Research and extension functions are supported by the LSU AgCenter, and graduate education (Ph.D. and M.S.)

and research are supported by the College of Agriculture. Although the department does not offer an undergraduate degree in entomology, it participates with the departments of Agronomy and Plant Pathology and Crop Physiology in undergraduate instruction for two recently established concentration areas: Agricultural Pest Management and Urban Entomology in the Plant and Soil Systems Major. The department also offers a minor in entomology. The department provides a large number of undergraduate research opportunities, including independent research projects that lead to college honors.

External funding for the department amounts to nearly \$4 million annually. Undergraduate and graduate research are supported in all areas, primarily through external funding, with additional support from the AgCenter, College of Agriculture and LSU. Departmental students have competed successfully for Graduate Supplements and Dissertation Year Fellowships. Several students have acquired NSF or other fellowship support. Graduates have pursued careers in academia, chemical industry, agricultural consulting and state and federal pest management and environmental management agencies. The department is seeking external support for graduate fellowships.



populations in Hangzhou, Xiamen, Lufeng and Hengyang. Active colonies were found in live trees lining city streets in Hangzhou and Hengyang and in private homes, schools, Buddhist temples and even the surgical ward of the Affiliated Hospital of Nanhua University in Hengyang. In natural habitats, colonies were found in old pine stumps along logging paths. Husseneder and Vargo plan to compare genetic diversity, colony breeding structure and levels of aggression between Chinese colonies and introduced populations in the United States, using genetic markers and aggression tests, to discover what makes the Formosan subterranean termite such a successful invader and, if possible, the source of our introduced populations. Husseneder and Vargo were hosted during their trip by colleagues at Zhejiang University in Hangzhou and Hengyang Termite Prevention and Control Institute.

Dr. Husseneder collecting termites from city trees under the eyes of curious citizens. (Photo by ??????????)

Student Activities

The Entomology Club has been an active organization that provides social opportunities for graduate and undergraduate students. The club regularly hosts the Spring Crawfish Boil and the Fall Cookout that have treated the department to outstanding seasonal cuisine, augmented by potluck items representing the international flavor of our faculty, students and staff.

At the Spring Crawfish Boil, graduate student Lee Womack (M.S. 2006) serves a fresh batch under the watchful eye of Dr. Mary Grodner. (Photo by Julia Sokolova, postdoc, Dr. Jim Fuxa's lab)



The Entomology Club Fall Cookout is an excellent opportunity for new and continuing students, faculty and staff to get acquainted. (Photo by Tim Schowalter)



Outreach Activities

The Entomology Department was invited to develop displays for the week-long AgMagic, an interactive event sponsored by the LSU AgCenter during the week of Earth Day. We provided posters, living organisms, a small, walk-through butterfly/caterpillar house, short tables with magnifying lenses to observe specimens of local interest, terraria featuring fire ants, termites, Madagascar hissing cockroaches, silkworm caterpillars and giant African millipedes. Display boxes from the Louisiana State Arthropod Museum represented insect diversity, tropical insects and common insects of Louisiana. Most faculty and many of our students and staff attended to help answer questions during the week. Approximately 10,000 area public and private school students, teachers and parents, as well as the general public, attended the event in 2006, and 13,000 attended in 2007. Our exhibit was the most popular according to surveys returned by participants. We are working on expanded offerings for next year.

A number of faculty, students and support staff help public and private school teachers expose K-12 students to insect diversity and the importance of insects to health, food production and ecological values. Two examples can be seen in the photos.



Visitors to AgMagic explore specimens of local and exotic insects. (Photo by Mark Claesgens)



Abner Hammond with second graders from Lewis Vincent Elementary School in Baton Rouge.



Dale Pollet with second- to fourth-grade students at St. James Episcopal School in Baton Rouge.



Sign advertising the successful campus-wide fire ant suppression program to visitors.

LSU Campus to Be an Example of Area-wide Control of Fire Ants

Dale Pollet has been working with the LSU Landscaping Services to make the LSU Campus an example of area-wide control of fire ants. Landscape crews have been spreading Extinguish Plus across campus the past two years and have noticeably reduced the incidence of fire ants, especially mounds. This has made campus a safer and more pleasant environment for faculty, staff, students and visitors, especially the thousands of tailgaters during football season. It demonstrates the success of techniques we are recommending for fire ant control. Signs have been placed conspicuously around the stadium and major access routes to advertise the program, provide contact information and encourage attendees to take this methodology home. Additional materials have been distributed to campus visitors by departmental volunteers.

Department News

New Faculty

Claudia Husseneder, Assistant Professor for molecular genetics, joined the department in March 2003. Her research addresses colony identification and mate selection of Formosan subterranean termites in the French Quarter program and molecular evolution of termites.

Timothy Schowalter joined the department in April 2003 as Professor and Head. In addition to administrative responsibility, he continues long term research on forest insect responses to natural and anthropogenic disturbances in Louisiana, Puerto Rico and Taiwan.

Fangngeng Huang, Assistant Professor for pest management in corn and small grains, came from Kansas State University in March 2004. He is focusing on development of resistance to Bt crops. He coordinates and teaches our new Advanced IPM course.

Wayne Kramer, Associate Professor for medical entomology, moved from Nebraska in November 2005. He co-teaches our Medical/Veterinary Entomology course and will be offering Forensic Entomology in the spring term, for the first time in many years.

Natalie Hummel, Assistant Professor for extension rice entomology, started in July 2007. She is responsible for developing an extension program to support pest management of rice and tree fruits. Currently, she is surveying rice for occurrence of the rice panicle mite, a pest recently discovered in Texas.

Jeffrey Davis, Assistant Professor for soybean pest management started November 1, 2007. He is responsible for research on soybean insects and will contribute to departmental teaching.

Retirement

Richard Goyer, Professor for forest entomology, retired in September 2004 but continues to be active as Professor Emeritus.

Departures

Boris Castro, Assistant Professor for extension rice pest management, accepted a new position with Texas A&M University in Weslaco in April 2006.

Matt Baur, Research Assistant Professor for soybean entomology, departed in June 2007. He assumed responsibility for the soybean ento-

mology program after David Boethel became Vice Chancellor and Director of the Louisiana Agricultural Experiment Station in 2005.

David Boethel became Vice Chancellor and Director of LAES in 2005.

Honors and Awards

Lane Foil received the ESA Southeastern Branch Recognition award in entomology in 2004 for career contributions to management of livestock pests. **Mary Grodner** received the ESA Southeastern Branch Distinguished Achievement award in regulatory entomology in 2004 for efforts to promote pesticide safety education and her leadership in establishing the American Association of Pesticide Safety Educators. **Dennis Ring** received the ESA Southeastern Branch Distinguished Achievement award in extension in 2005 for leadership of the Formosan Subterranean Termite Control Demonstration program in the French Quarter.

Gene Reagan was appointed Austin C. Thompson Professor of Entomology in 2005 in recognition of career contributions to integrated pest management. **Michael Stout** was appointed the first L.D. Newsum Professor in IPM in 2006 for



Lane Foil



Mary Grodner



Dennis Ring



Gene Reagan



Michael Stout

contributions to integrated pest management in rice. **Roger Leonard** was appointed Jack Hamilton Endowed Chair in Cotton Production in 2006 in recognition of contributions to pest management and increased yields in cotton agroecosystems. **Gregg Henderson** was appointed the first Paul K. Adams Professor of Urban Entomology in 2007 for contributions to structural pest management. **Chris Carlton** received the John Benjamin Holton Alumni Association Departmental Professorship in Agriculture for contributions to research and teaching in the College of Agriculture.

Richard Goyer received the AgCenter Doyle Chambers Research award in 2003 for career research accomplishments in forest entomology. **Gene Reagan** received the Chambers award in 2004 for career research accomplishments in management of sugarcane insects. **Lane Foil** received this award in 2006 for his career research accomplishments in management of livestock pests.

Michael Stout received the AgCenter Larry Rogers award in 2004 for research accomplishments during the previous five years on integrated pest management in rice agroecosystems.

Several faculty have been recognized for service to 4-H programs. **Jack Baldwin** received a 4-H specialist award in 2004, and **Dale Pollet** and **Dennis Ring** both received this award in 2006. This award reflects exceptional service to 4-H youth development through their administration of insect identification and demonstration teams competitions and contributions to the annual award tour for competition winners.

Dorothy Prowell was recognized as the 2007 National Association of Colleges and Teachers of Agriculture (NACTA) Outstanding Teacher in the



Roger Leonard



Gregg Henderson

College of Agriculture. **Linda Hooper-Búi** was added to the Gamma Sigma Delta Teacher Merit Honor Roll in 2006. Both were recognized for significant contributions to service-learning and other new approaches to improving student learning in their classes.

Recent promotions include **Linda Hooper-Búi**, promoted to Associate Professor with tenure in 2004, **Ralph Bagwell**, promoted to Professor in 2004, **Chris Carlton**, promoted to Professor in 2005, and **Alan Morgan** and **Mike Stout**, promoted to Professor in 2007.

Among students, **Andrew Cline** (2006 Ph.D. graduate under Carlton) received the ESA Comstock award in 2004. **Karen Nix** (2005 M.S. graduate under Henderson) received the South-eastern Branch, Entomological Society of Americas Kirby L. Hays Memorial award in 2005. These are the two highest awards given to Ph.D. and M.S.

students, respectively, by the ESA.

Poornima Jayasimha (2006 M.S. graduate under Henderson) received the 2006 William L. and Ruth D. Nutting Award for "outstanding achievements in basic termite biology" from the International Union for the Study of Social Insects (IUSI).

Katie O'Brien (2005 M.S. graduate under Hooper-Búi) received the 2004 M.S. student scholarship from the National Conference on Urban Entomology. A large number of students have received awards for oral paper or poster presentations at regional and national meetings. Our highest departmental award for graduate student accomplishments is the L.D. Newsom Graduate Student award. The 2003 awards went to **Francis Reay-Jones** (Ph.D. student under Reagan) and **Jessica Rosson** (M.S. student under Hooper-Búi); the 2004 awards went to **Kelly Tindall** (Ph.D. student under

Stout) and **Shawn Dash** (M.S. student under Hooper-Búi); and the 2006 awards went to **Latha Bommireddy** (Ph.D. student under Leonard) and **Josh Temple** (M.S. student under Leonard). Awardees receive \$1,000 and a decorative plaque (Ph.D.) or certificate (M.S.).

Three of our major nationally competitive grants were a \$650,000 grant from NSF to **Chris Carlton** for work on beetles as part of the All Taxa Biodiversity Inventory in the Great Smoky Mountains National Park (2005-2009); \$310,000 from the Department of Defense to **Lane Foil** and Ph.D. student **Thomas Mascari** for work on sand fly vector epidemiology (2005-2008); and \$400,000 from NIH to **Lane Foil** and **Kevin Macaluso** (Department of Pathobiology) for work on the role of fleas in transmission of *Rickettsia* (2007-2009).

Department Receives Generous Endowments

We have received several generous endowments during the past year.

John and Grace Roussel Graduate Fellowship (\$15,000) John Roussel was Professor and Assistant Director of LAES from 1949 to 1983. He was a co-author of the 1957 paper documenting boll weevil resistance to DDT, a major discovery that helped change reliance on pesticides and contributed to the LSU AgCenter's preeminence in developing principles of IPM, including alternative management practices and resistance management. Dr. and Mrs. Roussel generously established this fellowship before Dr. Roussel passed away October 30, 2006.

Robert W. Burrell Memorial Scholarship (\$79,000) Dr. Burrell was Research Entomologist, specializing in biological control, with USDA Bureau of Entomology from 1927 to 1965. He was working with biological control organisms in Japan at the outbreak of WWII and was interred in a Japanese prison. The LSU archives includes a 9-page memoir of his prison experience. He moved from Yakima, Wash. to Baton Rouge in 1953 as head of the USDA Grain and Forage section and worked on biological control of sugarcane insects, among others, until retiring in 1965. He died in 1966.

D. Michael Chambers Endowed Scholarship (\$20,000) Dr. Doyle Chambers served as Director of the Louisiana Agricultural Experiment Station for 21 years until he retired in 1985. Vice Chancellor was added to his title in 1979. Dr. Chambers is best remembered for his role in creating the LSU AgCenter as a separate institution with its own administration within the Louisiana State University System to direct agricultural funding straight into research and extension.

L.D. Newsom Professorship in IPM (\$100,000) This was completed by Dow Agro Sciences and matched by the state. Dr. Newsom became the first head of the Department of Entomology in 1974. He was a pioneer in the development of the principles of integrated pest management. His work with boll weevil diapause became a cornerstone of the boll weevil eradication program. He served as a presidential science adviser during President Carter's administration, was a Fellow of ESA and was the first agricultural faculty member to be named Boyd Professor at LSU.

Jack Hamilton Chair in Cotton Production (\$1 million) This was completed and matched by the state. The chair was created by the Louisiana Cotton Producers Association (LCPA), the Louisiana Independent Cotton Warehouse Association (LICWA) and the Louisiana Cotton Ginners Association (LCGA) to honor Jack Hamilton who was an organizer and first president of the LCPA and also served as president of LICWA and LCGA.

Paul K. Adams Endowed Professorship in Urban Entomology (\$217,175) This has been completed and matched by the state. This professorship was the result of efforts by the Louisiana Pest Management Association, and LPMA member organizations and individuals. Mr. Adams founded Adams Pest Control in Alexandria in 1946 and later expanded to offices in DeRidder, Marksville, Natchitoches and Leesville, Louisiana and Jasper, Texas. He drafted both the original minimum treating specifications for termite control in Louisiana and the first standard termite contract and guarantee. His service to the industry includes holding a number of offices, including president, in both the National Pest Control Association and the Louisiana Pest Control Association. Mr. Adams passed away April 3, 2001.

We Made the Urban Legends Web Site!

Many of you may have seen this e-mail that was circulated widely during February and March 2006:

"Subject: Fw: important if you buy mulch this year

If you use mulch around your house, be very careful about buying mulch this year. After the hurricane in New Orleans, many trees were blown over. These trees were then turned into mulch, and the state is trying to get rid of tons and tons of this mulch to any state or company who will come and haul it away. So, it will be showing up in Home Depot and Lowes at dirt-cheap prices with one huge problem: Formosan termites will be the bonus in many of those bags. New Orleans is one of the few areas in the country where the Formosan termites have gotten a strong hold, and most of the trees blown down were already badly infested with those termites. Now, we may have the worst case of transporting a problem to all parts of the country that we have ever had. These termites can eat a house in no time at all, and we have no good control against them, so tell your friends that own homes to avoid cheap mulch and know where it came from."

Of course, this was a hoax – the Louisiana Department of Agriculture and Forestry, acting on our recommendation, had established a quarantine October 3, 2005 on all

organic debris from infested areas, prior to accessibility of flooded areas, and we had posted Web pages warning against transport of potentially infested materials (see http://www.lsuagcenter.com/en/environment/insects/Termites/formosan_termites/Experts+Warn+Against+Spreading+Termites+After+Storms.htm). We quickly posted a new Web page to address this concern (see http://www.lsuagcenter.com/en/environment/insects/Termites/formosan_termites/Efforts+under+way+to+prevent+spread+of+Formosan+subterranean+termites+in+mulch+from+Louisiana+follow.htm). Nevertheless, our AgCenter Web site received more than 7 million hits because our Web site address was included in chain e-mails. Dennis Ring reported responding to 700 e-mails and was interviewed by Louisiana Public Broadcasting (see http://www.lpb.org/programs/swi/streaming.cfm?PageNum_getShow=11). Other faculty members also responded to inquiries from colleagues and acquaintances. Eventually, the story ended up on the Urban Legends Web pages (see http://urbanlegends.about.com/library/bl_mulch_termites.htm; <http://www.snopes.com/inboxer/household/termites.asp>), good recognition for our termite control program and efforts to prevent spread of Formosan termites.

Recent Departmental Publications

Baldwin, J.L., F. Huang and B.R. Leonard. 2006. Corn Borer Pests in Louisiana. *La. Coop. Exten. Svc. Pub.* 2947.

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Castro, B.A., B.R. Leonard, and T.J. Riley. 2004. Management of feeding damage and survival of Southwestern corn borer and sugarcane borer (Lepidoptera: Crambidae) with *Bacillus thuringiensis* transgenic field corn. *J. Econ. Entomol.* 97: 2106-2116.

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In Memoriam

Michael Perich (Assistant Professor, 2000-2003) replaced Lamar Meek as our medical entomologist. He had recruited six students, had contributed greatly to the development of mosquito abatement districts in Louisiana following the appearance of West Nile Virus in 2002 and was building a successful research program in mosquito behavior and control when he was killed in a car crash on October 11, 2003.

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Recent Graduate Students

M.S.

Chanda Bartholemew (M.S. 2004, Major Prof, Prowell) is an environmental scientist with the Louisiana Department of Environmental Quality.

Brett Collier (M.S. 2004, Major Prof, Perich and Henderson) is an officer and medical entomologist in the U.S. Army.

Shawn Dash (M.S. 2004, Major Prof, Búi) is a Ph.D. student at the University of Texas, El Paso.

Rhett Gable (M.S. 2005, Major Prof, Leonard) is a pesticide safety coordinator and warehouse/distribution manager for United Ag Products in Rayville, La.

Poornima Jayasimha (M.S. 2006, Major Prof, Henderson) is a Ph.D. student in entomology at LSU.

Crawford Johnson (M.S. 2004, Major Prof, Goyer) is a research assistant with the U.S. Forest Service.

Robert Jones (M.S. 2004, Major Prof, Leonard) is an independent agricultural consultant on field crops in northeastern Louisiana.

Paul McLaughlin (M.S. 2004, Major Prof, Henderson). Unknown

Karen Nix (M.S. 2005, Major Prof, Henderson) is a technical director for Massey Services, Inc. in Florida, with responsibility for training pest control technicians.

Kathryn O'Brien (M.S. 2005, Major Prof, Búi). is teaching biology and physical science in the Tampa Bay, Fla. area.

Dilipkumar Patel (M.S. 2005, Major Prof, Fuxa and Stout) is working as a biostatistician for Pfizer.

Ashley Peters (M.S. 2004, Major Prof, Leonard) is an agricultural supply salesman and professional fieldman.

Fred Posey (M.S. 2004, Major Prof, Reagan) is an agricultural consultant with Viator Crop Consulting.

Jessica Rosson (M.S. 2004, Major Prof, Búi) is a Ph.D. student at the University of Tennessee.

Isidra Sabio (M.S. 2005, Major Prof, Foil) is a medical entomologist with the United Nations Development Program in Tegucigalpa, Honduras.

Michael Seymour (M.S. 2007, Major Prof, Búi) is a scientist with the Louisiana Department of Wildlife and Fisheries.

Joshua Temple (M.S. 2007, Major Prof, Leonard) is a research associate and recently started a Ph.D. program in the LSU Department of Entomology.

Sunil Tewari (M.S. 2007, Major Prof Johnson) is a Ph.D. student in the entomology department at the University of Massachusetts.

Lee Womack (M.S. 2006, Major Prof, Búi) works for the Shaw Group in Baton Rouge, La.

Ph.D.

Andrew Cline (Ph.D., 2005, Major Prof, Carlton) is senior insect biosystematist and supervisor with the Plant Pest Diagnostics Branch, California Department of Food and Agriculture.

Aboubacar Diagne (Ph.D. 2004, Major Prof, Story) Unknown

Rebecca Effler (Ph.D. 2004, Major Prof, Goyer) is a postdoc with the

University of Georgia, studying forest entomology on Sapelo Island.

Francis Reay-Jones (Ph.D. 2005, Major Prof, Reagan) is an assistant professor of entomology at Clemson University.

Will Shepherd (Ph.D. 2004, Major Prof, Goyer) is a research entomologist with the U.S. Forest Service in Pineville, La.

Tara Smith (Ph.D. 2006, Major Prof, Hammond) is an assistant professor (80% Extension, 20% research) at the LSU AgCenter Sweetpotato Research Station in Chase, La., with responsibilities for statewide sweetpotato extension and for the foundation seed program.

Kelly Tindall (Ph.D. 2006, Major Prof, Stout) is an assistant professor at the University of Missouri.

Alexey Tishechkin (Ph.D. 2005, Major Prof, Carlton) is a postdoc in the LSU AgCenter Entomology Department.

Erin Watson (Ph.D. 2004, Major Prof, Carlton) is an assistant professor at Southeastern Louisiana University in Hammond.

Melissa Willrich (now Siebert, Ph.D. 2004, Major Prof, Leonard) is a scientist with Dow AgroSciences at a research facility near Stoneville, Miss. She coordinates and directs entomological research activities and insecticide development projects across Louisiana, Mississippi and Arkansas.

Li Zou (Ph.D. 2004, Major Prof, Stout) is a GIS scientist with GIS Consortium in the Greater Chicago, Ill. area.

Department of Entomology

Timothy D. Schowalter, Head
401 Life Sciences Building
Louisiana State University
Baton Rouge, LA 70803
tschowalter@agcenter.lsu.edu
Tel (225) 578-1634
Fax (225) 578-2257
www.lsuagcenter.com
<http://entomology.lsu.edu/index.htm>

Louisiana State University Agricultural Center

William B. Richardson, Chancellor
David J. Boethel, Vice Chancellor
and Director of Research
Paul D. Coreil, Vice Chancellor
and Director of Extension

Louisiana State University and A&M College

Sean O'Keefe, Chancellor
College of Agriculture
Kenneth L. Koonce, Dean

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Department Participates Again in AgMagic

Our area, "Bugs Rule," provided posters, living organisms, a small, walk-through butterfly/caterpillar house, short tables with magnifying lenses to observe specimens of local inter-

est, terraria featuring fire ants, termites, Madagascar hissing cockroaches, silkworm caterpillars, giant African millipedes and more.



AgMagic attendees enjoyed the display boxes provided by the Louisiana State Arthropod Museum. (Photo by Mark Claesgens)



Young children used crayons to create a spider, ant, bee, cricket, ladybug and butterfly rubbings on paper. (Photo by Mark Claesgens)