

Entomology@Purdue

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Entomology Outreach, Summer 2005

This summer faculty, staff and students contributed to the Department's outreach effort by developing and delivering engaging formal and informal programs, capitalizing on people's fascination with insects. Their efforts served to promote entomological knowledge and science literacy. Community and state-wide events continued to add to the department's popularity with the general public and the news media.

The Tippecanoe County Butterfly Count was held at the Eli Lilly and Company Wildlife Habitat Area in Lafayette on July 16th. Faculty, staff, students and volunteers from the community gathered to take a census of butterflies within the area, including butterfly identification training, naturalist led walks, and a picnic. Visit the following link for more information and to view the results of the count that were submitted to the North American Butterfly Association's annual report: http://www.entm.purdue.edu/Entomology/ext/Outreach/butterfly_count/index.html.

Representatives from the department were present in The Our Land Pavilion during the Indiana State Fair (August 10th-21st). Faculty, staff and students provided information on department research, extension, outreach activities and academic programs. Cockroach racing and cricket spitting are still popular events that interest thousands of visitors each year.

The cockroach races were held daily at Roachhill Downs in The Our Land Pavilion.

Hundreds of spectators gathered twice a day to witness the "greatest spectacle in roach racing." Spectators applauded while inch-and-a-half long American roaches raced around the oval track. Fair goers also enjoyed cheering on their favorite university as giant Madagascar hissing roaches hitched to miniature tractors, flying the flags of Purdue, Notre Dame, and Indiana University, competed in a tractor pull.

Cricket spitting at the Marsh Grandstand during Purdue Day is always a highlighted event. Participants discharged nearly 150

crickets in four hours with ribbons awarded to the top four finishers in the junior and senior men's and women's divisions.

Throughout the fair, Exotic Insects Education Coordinator **Jodie Ellis** displayed the department's professionally prepared Emerald Ash Borer exhibit. The display

provided information about emerald ash borer (EAB), an invasive insect from Asia that threatens North America's entire ash tree resource (*Fraxinus* spp.). Since its discovery in the Detroit/Windsor area in 2002, EAB has killed over 15 million ash trees and has since been detected in northern and central Ohio and northeast Indiana. This pest is the subject of a federal eradication program in which all ash trees within 1/2 mile of an infested tree will be cut and either destroyed or processed to remove the threat of further spread of EAB. Because the display stressed the public's role in slowing this insect's movement, the State



2005 STATE FAIR CRICKET SPITTING STAFF: (clockwise from left) Philip Morton, Jody Green, Brad Barnd, Tom Turpin, and Margaret Schwinghammer.



Steve Yaninek

From the Head Bug

Our Alumni, Our Legacy

If students are the life-blood of universities, then alumni are certainly their legacy, and if the careers of our alumni are a measure of our impact as an alma mater, then we have been very successful. We have outstanding alumni in Entomology, and we don't miss an opportunity to talk about their accomplishments and achievements.

I knew a few alumni before I came to Purdue five years ago. These were individuals whose paths I crossed because of professional interests. I have since had the privilege of meeting many alumni with a collective history that spans more than 60 years, and I know there are alumni still alive who have been around longer than that.

The success of our alumni is something students notice and understand. Current students have come to appreciate the career opportunities represented by our alumni while prospective students have a solid basis for making informed decisions about their future.

Alumni are very interested and supportive of our students. They give guest lectures, host workplace visits, share professional experiences, and help future graduates find internships and new graduates find jobs. They willingly provide advice about careers

and the real world to our budding professionals. Several alumni contribute as adjunct faculty. Current students are future alumni and are eager to learn from their future peers. More than 90% of our graduates pursue a higher degree or move into the workplace. Within a few years, these new alumni typically move into positions of responsibility and start making names for themselves.

Our alumni have pursued successful careers in all the obvious places in industry, government, and education where entomologists or someone with a background in the life sciences would be employed. Quite a few have started successful businesses and some have moved into noteworthy careers outside of entomology but cherish their training and experiences while at Purdue.

Our alumni are outstanding ambassadors for the Department and Purdue University. They are generous with their time, talent, and checkbooks. They serve on the Development Council, provide solicited advice and feedback on a variety of issues, and help out wherever they can. Alumni donate about \$10,000 a year in general gifts to the department for a variety of student activities. They have also contributed to new student scholarships, restoration of the historic classroom and foyer in the old Entomology Hall, and an endowed professorship to honor John V. Osmun. This fall an alumnus was recognized for a major gift to Purdue for a new structural biology facility.

We could not be prouder of our alumni, their accomplishments, and all that they do for Entomology and Purdue University. We hope this newsletter helps keep alumni connected and informed about the department. Drop us a line we can share if you get the chance.

~Steve Yaninek~

Fair was a good place to introduce Hoosiers to the problem.

To learn more about emerald ash borer visit: <<http://www.entm.purdue.edu/EAB>>. To view pictures from the Indiana State Fair visit <<http://www.entm.purdue.edu/Entomology/ext/Outreach/StateFair/stateFair05pics.htm>>.

"Science on Six Legs: An Insectaganza of Education" is another department wide outreach event held in October. Over 1,200 fifth grade students from area schools were at Purdue for a day-long entomological experience. The program included an insect dissection laboratory, a presentation on insect biology, and a friendly insect quiz competition between schools.

To encourage an appreciation of insects for people visiting campus, **Tom Turpin** is busy transforming his lab in Smith Hall into our new outreach center, the "Boiler Bug Barn." Visitors will be able to view and interact with live insects and other arthropods while they learn about their important role on Earth.

The ceiling and walls of the lab are now lined with insect lights, artwork, and kites. Live displays will include a beehive, ant colony, crickets, millipedes, and stick insects. Visitors will also have access to a computer that contains educational software. The outreach center will be open in October.

~Mike Mullis~



Department News

New Staff

Joe Caudell joined the Indiana USDA APHIS Wildlife Services program in August. Joe received his BS from the University of Georgia and his MS and PhD from the Berryman Institute at Utah State University. Joe will be working on zoonotic disease issues

such as rabies and West Nile virus in Indiana and Ohio.

Janice Van Zee, **Cate Hill** and **Jeff Stuart**'s new laboratory technician, started in July and is working on a project in tick cytogenetics. Janice is originally from Brazil and earned an MS in Agronomy from Purdue.

Three new employees joined the CERIS team as Programmer/Analysts. **Mike Hill**

started in June. Prior to coming to Purdue he was a Software Engineer at EDS in Kokomo, IN. **James Kruse** also started in June after serving as a computer consultant in St. Charles, Missouri. James brings 20 years experience in the IT field. **Shen Wang**, CERIS' newest employee, earned a BS in Computer Science from Purdue and completed her MS in Agricultural and Biological Engineering last May.

Weddings and New Arrivals

Hongmei Li was married on August 6th to Wayne Byarlay. Hongmei is a PhD candidate studying genetics with Barry Pittendrigh.

Jennifer and **Christian Krupke** welcomed a new son, Sebastian Alexander, on August 10th. Christian is a faculty member specializing in field crops.

2005 Osmun Award Winner



Michael L. McManus

Mike was born and raised in Chicago, Illinois, but he frequently spent his summers with relatives in Winamac, Indiana, working on local farms and at various odd jobs. It was during this time that he developed his love and appreciation for the outdoors. He received all of his degrees from Purdue University: BS in Agriculture [Entomology] in 1959, MS in 1962 under Professor Don Schuder, and PhD in 1966 under Professor Ron Giese.

Mike joined the USDA Forest Service in April 1966 as a research entomologist at the Forest Insect & Disease Laboratory in Hamden, Connecticut. He was appointed Research Project Leader in 1973 and in 1975 was selected to be the Research Coordinator for the Agency's National Gypsy Moth Research and Development Program, serving in that capacity until 1980. He also was a lecturer in Forest Entomology at the Yale University School of Forestry & Environmental Studies from 1972-1980. Mike was appointed Project Leader of the Insect Pathology and Microbial Control research project in 1985 and still serves in that capacity today.

Genomics Analogy Model for Educators

Drs. **Barry Pittendrigh** (MS '94) and Kathryn Orvis (Department of Youth Development and Agricultural Education and Department of Horticulture and Landscape Architecture) are developing a teaching methodology for genomics that involves everyday items and concepts (such as Lego® blocks) and familiar concepts to explain gene sequencing, small-town library analogy models to explain how cells function, and a football field analogy to explain genomic microarrays. They call this teaching approach the Genomics Analogy Model for Educators or G.A.M.E. for short. They have also been working with Drs. **Al York** and **Chris Oseto** (both Professors in Entomology), along with **Anne Radavich** (graduate student in Entomology), to develop G.A.M.E. teaching approaches for visually impaired and blind students.

Mike Mullis (Outreach Coordinator, Department of Entomology), Anne Radavich, and **Scott Charlesworth** (Technical Assistant, Department of Entomology) have been developing educational packages for teachers to download from the G.A.M.E. website, currently online and accessible to the general public. Over the past year Scott Charlesworth has been working on the new G.A.M.E. website. Says Pittendrigh, "Scott has been a driving force behind the design of the new G.A.M.E. website." Pittendrigh also went on to say that, "Anne, Mike, and Scott have developed some very easy ways to use teaching packages that will allow educators, for example, to explain such concepts as alternative splicing using peanut butter and jelly sandwiches." The G.A.M.E. website can be found at <<http://www.entm.purdue.edu/extension/genomics/GAME>>. Watch for new updates on the G.A.M.E. website, including an upcoming Spanish language version being developed collaboratively with graduate students in the Foreign Languages and Literature department (Charles Butler and Julia Bello) along with Entomology graduate student **Yaritza Charneco**. For further information about G.A.M.E. feel free to contact Drs. Barry Pittendrigh (pittendr@purdue.edu) or Kathryn Orvis (orvis@purdue.edu).

~Paula Layden~

Department Fall Picnic



DIGGIN' IN: No room for ants at this picnic!



CHEERS: What's in the cup, John?



"OZ": Special guests, John and Dortha Osmun, visit with Tom Fisher.



WELCOME: Steve Yaninek welcomes some of the new students to the department.

John V. Osmun Award Nominations

Nominations are being accepted for the 2006 John V. Osmun Alumni Professional Achievement Award in Entomology. You can access the electronic form at <<http://www.entm.purdue.edu/osmunaward>>.

Immersive Ecological Experience

Jeff Holland is developing a virtual ecological simulation that will run in Purdue's Envision Center for Data Perception. Participants will use the Envision Center's 'cave' to immerse themselves in the modeled environment which will include realistic environmental settings and fully-rendered mobile insects. This simulation experience will allow students to see multi-dimensional interactions in real-time, giving them a better understanding of the underlying principles. The simulation will be controlled by parameters set by the participants from within the simulation. Participants will be able to move around in the simulation to change their perspective while it is running. The dynamic nature of the simulation will intuitively convey the complex and dynamic nature of ecological systems and populations.

The first use of the Immersive Ecological Experience will be a module that will explore the Equilibrium Theory of Island Biogeography. This module is currently under development and will be used to teach a class in Biodiversity (ENTM 320) in the spring semester of 2007. Additional mod-

ules for using the virtual reality simulation environment are being explored.

This project is supported by an ITaP (Information Technology at Purdue) Digital Content Development Grant. Christian Reiner of the Center for Instructional Excellence is providing help with evaluation of the project.



IMMERSIVE ECOLOGICAL EXPERIENCE TEAM: clockwise from top left: Jeff Holland (Asst. Prof., Entomology) is the project leader, Matt Brisbin (Senior, Computer Graphics Technology) is modeling the animals and environment, Dr. Laura Arns (Assoc. Dir., Envision Center) is the Envision Center and technical liaison, David Foldes (MS candidate, Computer Graphics Technology) is programming the virtual environment, and Leslie Osborn (Senior, Biology) is providing research support for the model.

2006 IPRI Workshop Hosted by Purdue

The 17th Biennial International Plant Resistance to Insects Workshop will be held April 9 - 12, 2006 at the Purdue Memorial Union. Registration begins at noon on Sunday, April 9th. The workshop concludes at noon on Wednesday, April 12th. A tentative schedule and online registration are available at <http://www.oznet.ksu.edu/ipri/>.

70th Annual Purdue University Pest Control Conference

Starting with a gathering of less than 50 pest management professionals in 1936, the Purdue Pest Control Conference now attracts nearly 1,000 participants annually from around the world. The conference will be held January 9 - 13, 2006. Further information is available at <http://www.entm.purdue.edu/pestcontrol>.

Development Update

Your Gift Support

We hope you will consider joining Friends of Entomology. Recruiting, awards and recognition activities, travel support, and improving student resources are some of the student-based activities that your contributions help pay for.

Several levels of giving have been created and a separate giving form is included with this newsletter for your convenience. For more information contact Paula Layden, (plloyd@purdue.edu) or 765-494-4553.



The Honor Roll recognizes those who made new gifts to the Department January -June, 2005.

Monarch Club (\$1000 up)

Abell Pest Control, Inc.
Burr Chemical Company, Inc.
Corky's Pest Control
Crane Pest Control
Griffin Pest Control
Dr. Austin M. and Barbara Frishman
George L. Hutton
Frank K. and Kristine Harder
Insects Limited
Dr. John V. and Dortha E. Osmun
Pestagon S. S.
Roland L. and Winona Rhodes

Honey Bee Club (\$500-\$999)

Dr. Eldon E. and Margene Ortman
James V. and Helen Benschoter

Firefly Club (\$101-\$499)

Kenneth F. Broda and Beverly Hobbs-Broda
Dr. Peter E. and Georgia C. Dunn
Dr. Robert L. and Geraldine M. Gallun
Lockheed Martin
Fritz W. and Anne T. Schumann
Syngenta Corporation
John M. and Mary K. Thieme

Mayfly Club (up to \$100)

Jacques A. Berlin
Larry W. and Janet E. Bledsoe
Robert M. and Joyce E. Brattain
Mary C. Clark
Christopher D. Harlow
Dr. David B. and Susan D. Hogg
Peter R. Johnson
Dr. James E. King
Bernard P. Kolkana
Dr. Jesusa C. Legaspi
Nicole R. Mason
Edward S. Saugstad
Frank E. Skinner
Dr. Phillip E. and Paula B. Sloderback
Aland B. Spice
Dr. Sven P. Strnad
Matthew R. Tarver
Seymour Taub
David O. Wietlisbach

Outreach Update

Butterfly Count



IDENTIFICATION TRAINING: Arwin describes butterflies that participants may find.



COUNTDOWN: Participants get ready to head out as they listen to final instructions.

Purdue Day at the Indiana State Fair



STAFF VOLUNTEERS: Amanda Pendleton and Angie Sigo take a break from helping with the Cricket Spitting event.



ROYALTY: Tom Turpin poses with Indiana State Fair Queen, Tiffany Miller.

Entomology Students

Scholarships and Awards

Jody Green (MS '04) received a \$1,500 Pi Chi Omega Scholarship in Urban Pest



Jody Green

Control. Jody's MS and PhD research on subterranean termite ecology and management is recognized as significant to urban entomology and pest management by Pi Chi Omega, the international fraternity of pest management professionals, whose goal is to promote education within the pest management industry. Her contributions to this goal, as well as her potential for impact on the industry in the future, are viewed as being exemplary.

College of Agriculture Scholarship Awards 2005-2006

Agriculture Research Fund Scholarship
Michael Walter Baldauf, Lafayette, IN

Floyd and Nellie Elliott Scholarship
Kyanne Reidenbach, Fort Wayne, IN
Tabatha Carroll, Linton, IN

Junior Scholarship
Nicholas Seiter, Greensburg, IN

Lewis Runkle Scholarship
Jay Bailey, Indianapolis, IN
Matthew VanWeelden, Indianapolis, IN

Scholarship Award of Excellence
Amber Vinchesi, Pepperell, MA

New Fall 2005 Students

Undergraduates:

Caleb Cummins, sophomore transfer from Laporte, Indiana; **Emily Kraus**, sophomore codo from Sunman, Indiana; **Jacob Rowland**, sophomore codo from Rensselaer, Indiana; **Shauna Stapleton**, freshman from Springfield, Ohio.

Graduate Students:

Carolyn Foley, MS candidate from the University of Windsor, Ontario, Canada works with Jeff Holland; **Alana Jacobson**, MS candidate from New Mexico State University works with Rick Foster; **Adam Tyler**, MS candidate from Purdue University works with Chris Oseto.

Thomas Say Society

The Thomas Say Entomological Society has started a new year with several activities in the works. President Nick Seiter reports that a community service project is being planned which will involve bringing a display of insect specimens to local elementary schools. Other possible activities include camping, a trip to the Cincinnati Zoo, and an insect movie night. The club also plans revisions to their website which can be found at <http://www.entm.purdue.edu/thomas-say/main.html>.

Graduate Students Pursue Professional Development

Graduate students in entomology have already been busy this semester. In spite of the beginning of classes and the continual call of research, our graduate students have found time to further their professional development. The Entomology Graduate Student Organization (EGO) recently sponsored a seminar, Teaching and Designing Curriculum, led by Mike Mullis and Al York, as part of the Survival Skills seminar series. This seminar series focuses on skills needed to be successful after graduate school. The next topic will cover creating a dynamic CV.

This year EGO is also looking forward to sponsoring the fourth annual graduate student symposium. Graduate student participants will take this opportunity to give 10 minute oral presentations or poster presentations during two of the regularly scheduled seminar times. This is a great opportunity to receive excellent feedback from the audience, not to mention practice before the ESA national meeting. This year's symposium will be held on October 27 and November 3 at 3:30 p.m.

(Continued on page 6)

(Continued from page 5)

Graduate students will also pursue further professional development at the Ohio Valley Entomological Association (OVEA) annual forum this year. Many students already plan to attend this regional meeting of entomology students, faculty, government, and industry professionals from Indiana, Ohio, and Kentucky. This meeting is ideal for students due to the competition categories of undergraduate, masters, and doctoral students as well as the cash prizes for the top three presenters in each category. The OVEA meeting was held at the Cincinnati Museum Center in Cincinnati, Ohio on October 21, 2005 <<http://www.entm.purdue.edu/OVEA>>.

Study Abroad Course in Western Europe

Students and faculty continue to be very involved in Study Abroad courses. **Dr. Al York**, accompanied by George Van Scoyoc (Agronomy) and Steve Weller (Horticulture), for the second time taught a class on Organic and Conventional Agriculture in Western Europe. Of the 18 students on the trip, 4 were Entomology majors and 3 were Entomology minors. During May of 2006, Chris Oseto will again lead a class in Costa Rica and Cate Hill will lead a class in Australia. This semester, entomology student **Tabor Wilson**, is studying in Dublin, Ireland. Of the current entomology students, 16% have been involved in a university sponsored international program.



SOUTH FRANCE: Wai-Han Chan, Autumn Nance and Jane Jacobi.



MILLAU BRIDGE: Wai-Han Chan enjoys the panoramic view in southern France.



Omprakash Mittapalli

Meet Omprakash Mittapalli

Hello all!
Born in Warangal, one of the historic and most rapidly developing towns in India,

I consider myself very fortunate to be an integral part of its diversity. Hobbies that I most enjoy include sports (cricket, soccer, tennis, etc.), music and numismatics.

My schooling commenced at the age of five in a glorious high school (The Blue Mountains), located amongst a dense mountainous stretch in a city named "Ooty" (Niligiris, Tamil Nadu). Indeed Ooty is considered the most scenic city in South India. This extreme opportunity was possible primarily due to my grandparents' efforts as they realized the importance of education, and I was the chosen one.

With an inclination towards science, I pursued a bachelors degree in Agriculture at the Andhra Pradesh Agricultural University. It was during this time-frame that I was fascinated with entomology and for which the thirst for knowledge in this expertise rewarded me with a gold medal. Upon completion of my bachelors, I was recruited as an Agricultural Officer in my home district of Warangal. This enabled me to get first hand experience with farmer related problems and more importantly to act as a connecting link between lab-oriented technology and field applicability. I then started to think about undertaking my higher studies abroad and was awarded a post graduate (masters) scholarship by the Department of Plant Sciences, University of Saskatchewan, Saskatoon, Canada. Wow! I thought but never knew that I had to cope up with winter temperatures ranging between -30 to -50°C for 2-3 years. To my surprise the warmth was provided by my supervisor, Dr. Gordon Rowland, and his family who was super nice and helped me in every regard. I still have an intimate association with the Rowlands. In spite of successfully graduating with a masters in Plant Breeding and Genetics, my innermost decision was to pursue a PhD in entomology.

Here I am in the Department of Entomology at Purdue currently trying to dissect the molecular basis of the Hessian fly/wheat interaction for a PhD under the supervision of **Dr. Rich Shukle**. It really feels so great to pursue whatever is in your heart. However, I must confess that this satisfaction is primarily due to Dr. Shukle, who has shown immense enthusiasm in whatever I have done thus far. I personally feel that freedom in research should be given the utmost priority, and this is what I have found at Purdue. My project concentrates on the midgut transcriptome (entire group of mRNAs) of the Hessian fly (*Mayetiola destructor*), which is the most destructive insect pest of wheat in the United States. This study will allow us to understand how the larvae are able to feed and survive on wheat plants and thereby could enable us to identify possible (gene) targets for its control. With a huge on-going Expressed Sequence Tag (EST) project, we have accomplished the characterization and transcription profiling of a number of genes that seem to play a vital role in the insect/plant interaction (published and unpublished data). We will then perform a transcriptome-wide analysis via macro/micro arrays to determine expression patterns of gene entities in compatible (larvae develop normally) versus incompatible (larvae fail to develop) interactions. To spice this project up, we will also make a "comparative transcriptomics" study including two other globally important gall midge species; the wheat midge (*Sitodiplosis mosellana*), an important wheat pest in the Canadian prairies and the Asian rice gall midge (*Orseolia oryzae*), an economically devastating pest of rice in the Asian countries. Since all the three insect species are gall midges (cecidomyiids), we hope to find genes that are conserved amongst all species and unique to each species.

As to my next step in the career ladder, I will keep my options open till the best-suited one shows up. This article provides me a great opportunity to thank each one in the department in one way or the other. Cheers!!

~Omprakash Mittapalli~

Alumni News

Brian R. Flood (BS '70) has been with Del Monte Foods, Inc. in Rochelle, Illinois for 30 years. He wrote: "My 30 year career has been an adventure with a company focused on quality, consumer concerns, and cost containment. Del Monte has provided the resources, support, flexibility and freedom to conduct research focused on improving our operations. The results of these efforts has been a 50 - 95% reduction in pest management applications per crop while improving quality, recovery, and reducing pest contamination and cost. Thirty



Brian R. Flood

years ago, a young entomologist set out with a goal to produce crops 'residue free.' Well we have. All these positive aspects were a result of a dedicated network of individuals from agri chemical and food processing companies, IR-4 Minor Crops, state regulatory EPA, university personnel, and a host of dedicated Del Monte personnel. The adage 'many hands make light work' rings true.

The book 'Vegetable Insect Pest Management with Emphasis on the Midwest' by **Rick Foster** and Brian Flood bears witness to this collaboration. Ten years ago a 24 member group of vegetable entomologists shared their insight and backgrounds to redefine and redesign vegetable insect pest management. The efforts helped to establish working relationships and helped build a web-linked information system. Our second edition, ten years later, reflects technology changes and personal working relationships established and fortified by this first edition.

The fundamental skill set gained at Purdue and fine-tuned at the University of Wisconsin provided the background required for developing a systems approach to vegetable, fruit, and field crop production".

Ed King (PhD '88) is employed by Dow AgroSciences in Indianapolis, IN and lives in Carmel, IN. Ed has been married since 1992 to Michelle, and has two children, Serena and Zachary. He was a research scientist for Dow AgroSciences in the field of Urban Pest Management with five years in field Technical Service & Development, ten years

as a Laboratory Development Biologist and Global Leader for laboratory characterization of the Sentricon Termite Colony Elimination System. Ed was awarded for his efforts on Sentricon with the Dow AgroSciences GET (Global Excellence in Technology Development) award in 1998. In 2000 he received the Dow Chemical Cramer Award for Excellence in Technology Development, with co-recipient and fellow alumni, **Joe DeMark** (MS '88, PhD '92).

In addition to presenting and publishing numerous papers on termite and cockroach research during his tenure at Dow AgroSciences, Ed has been issued two patents and has several other patents pending.

Last year, Ed started a new role as Technology Transfer Leader within the Plant Genetics and Biotechnology Department. He is responsible for transfer and delivery of technical information on transgenic crops (e.g., BT corn and BT cotton) for use in training and communication activities for the field organization and external customers.

Roland Taff (BS '88) currently works for Borregaard LingnoTech where he sells Lingnin Sulfonate based chemistry to manufacturers. Roland's interests are children's hockey and muscle cars (Plymouth and Dodge), and he is a Midwest Representative for USA Hockey, Gladiator Organization. Roland, a resident of Omaha, Nebraska, has been married for thirteen years and has two children, ages 10 and 7.

Melvin Marks (BS '71) is a Pest Management Specialist for J. M. Waller Inc. where he reviews, rewrites and updates pest management plans for numerous installations and commands such as the Texas Army National Guard. He also writes articles for the quarterly US Army Reserve Command environmental newsletter.



Melvin Marks

For twenty years Melvin was an Applied Biology Program Manager, providing technical and managerial guidance for 36 major Navy and Marine Corps activities, also developing pest management courses.

Lyndsay Knoblock (BS '04) is currently in graduate school at the University of Arkansas, working on an MS in veterinary entomology under Dr. Dayton Steelman. Her project is focused on Distribution pathogen detection and management of filth flies on Arkansas dairy farms. Lyndsay was engaged earlier this year and the wedding is set for September 2006.



PURDUE ALUMNI: Lyndsay Knoblock (r) and **Rob Wiedenmann** (PhD '90), both currently in the Department of Entomology at the University of Arkansas, finish sampling flies at a turkey house in northwestern Arkansas.

Kenneth E. Brown (MS '71, PhD '73) lives in Dayton, Washington and reports that he is retired after twenty years of gainful employment with Merck, and Novartis & Syngenta. He now devotes his time to cattle ranching in the Pacific Northwest.

Jack Hart (BS '42) wrote to express his appreciation to those responsible for the growth of Purdue Entomology.

"Since 1938, when I first met up with the department as a student in the last class taught by J. J. (June Bug) Davis, I have enjoyed the steady maturation of the department. Although my professional entomological career was limited to four years of malaria research with the U.S. Public Health Service in the late forties, I have continued the study of insects and maintained some connections with Purdue. I no longer collect mosquitoes, Odonata, or the Collembola I studied with my colleague, Bob Waltz. I understand they are not really insects, but since they have six legs, antennae, and are considered to be of arthropod lineage from which insects evolved, I have not quite left entomology. It is still my love.

Regards to those with whom I have shared the enjoyment of working with insects."



November

6 - 9 ESA Meeting in Ft. Lauderdale, Florida

7 ESA Purdue Mixer in Ft. Lauderdale, Florida

January

9 - 13 70th Annual Pest Control Conference

February

11 Ag Fish Fry

From the editor

With each issue of **Entomology @ Purdue** we keep you up to date on what's happening in the Department of Entomology and with Alumni. Won't you please take a moment to help keep us up to date with you?

Paula Layden
Editor, **Entomology @ Purdue**
Department of Entomology
Purdue University
901 West State Street
West Lafayette, IN 47907-2089
plloyd@purdue.edu
Phone: 765-494-4553
Fax: 765-494-0535

Please include your name, address, degree, major and year of graduation. Photographs, if submitted, will be returned.

To update your contact information online, go to:
<www.entm.purdue.edu/alumni>