



IOWA STATE UNIVERSITY

Department of Entomology

Newsletter

September-December 2005

Arrivals

Dr. Lyric Bartholomay arrived from the University of Wisconsin-Madison as Assistant Professor of Medical Entomology. In addition to her research program on mosquito-virus interactions, she will oversee the regional surveillance program related to arthropod-borne pathogens and teach *Insects and Our Health*.

Graduations

Betsy Matos graduated with a Ph.D. under the direction of Dr. John Obrycki and is continuing as a postdoctoral research associate.

Gretchen Schultz graduated in December with a Masters of Science Degree and is now pursuing a Ph.D. under the direction of Joel Coats.

Awards and Honors

Greg Courtney was appointed as an Associate Editor of *Zootaxa*. Greg was also appointed as a Research Associate in Entomology of the Natural History Museum of Los Angeles County. The appointment extends through 2008.

Jerry DeWitt received the 2005 Spencer Award for Sustainable Agriculture from the Leopold Center for Sustainable Agriculture.

The 2005 Harold Stockdale Memorial Scholarships to freshman undergraduates were awarded to **Aaron Heit** and **Daniel Forbes**. These scholarships for \$500 each were awarded based on promise for a career in entomology.

Ashley Jessick, a summer intern in the Program for Women in Science and Engineering in the laboratory of Dr. Joel Coats, received second place in the student poster competition at the regional meeting of Environmental Toxicology and Chemistry.

Betsy Matos received a Teaching Excellence Award through the department of Horticulture. These awards recognize the top 10% of graduate student teaching assistants.

Rich Pope received a plaque from the Iowa Certified Crop Advisory (CCA) Board of Directors in recognition of his dedicated service to the Iowa CCA program.

Patricia Prasifka and Rayda Krell were appointed as local arrangement co-chairs for the 2007 National ESA Meeting to be held in San Diego, CA.

Kelsey Prihoda was awarded second place in the American Chemical Society's Agrochemicals Division Young Scientist Research Recognition Award competition.

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Marlin Rice, Matt O'Neal and Palle Pedersen were awarded the 2005 Educational Materials Award from the American Society of Agronomy at the ASA meeting in Salt Lake City Utah.

The 2005 Department of Entomology Herbert Osborn Awardees for Professional Performance were **Gretchen Schultz** (M.S. category) and **Jeff Bradshaw** (Ph.D. category). Gretchen conducted research with Dr. Joel Coats and Jeff conducted research with Dr. Marlin Rice.

Gretchen Schultz received a Research Excellence Award this year at the M.S. level. This award is given to the top 10% of graduate students for their research accomplishments. Gretchen conducted research in the laboratory of Dr. Joel Coats.

Publishing Activity

Published/In Press

Aldrich, B.T., Kambhampati, S. and **Krafsur, E.S.** 2005. Population genetics of wood-feeding cockroaches in the genus *Cryptocercus*. *Journal of Heredity* 96: 572-575.

Coates, B.S., Hellmich, R.L., Lewis, L.C. 2006. Sequence variation in trypsin- and chymo trypsin-like cDNAs from the midgut of *Ostrinia nubilalis*: Methods for allelic differentiation of candidate *Bacillus thuringiensis* resistance genes. *Insect Mol. Biol.* (in press)

Coates, B.S., Hellmich, R.L., Lewis, L.C. 2006. Exon-primed intron crossing (EPIC) and gene-specific single nucleotide polymorphism (SNP) markers suggest variation between North American *Ostrinia nubilalis* voltinism ecotypes that exist in allopatry. *Genetica* (in press).

Henderson, K.L.D., Belden, J.B., Zhao, S., and Coats, J.R. 2005.

Phytoremediation of pesticide wastes in soil. *Zeitschrift fur Naturforschung.* (in press)

Jacobson, A.J., J. Phasuk, J. Chanpaisaeng, and G.W. Courtney. 2006. The net-winged midges (Diptera: Blephariceridae) of Khao Yai National Park, Thailand, with description of a new species of *Blepharicera* Macquart. *Aquatic Insects* (in press).

Krafsur, E.S. and Endsley, M.A. Shared microsatellite loci in *Glossina morsitans sensu lato* (Diptera: Glossinidae). *Journal of Medical Entomology* (in press).

Krafsur, E.S. 2005. The role of population genetics in the sterile insect technique, pp. 389-406 *In* A.V. Dyck, J. Hendrichs, A.S. Robinson [eds], *The sterile insect technique. Principles and practice in area wide integrated pest management.* Springer, Heidelberg, Germany.

Krafsur, E.S., Cummings, M.A., Endsley, M.A. and Marquez, J.G. 2005. Geographic differentiation in the house fly estimated by microsatellite and mitochondrial variation. *Journal of Heredity* 96: 502-512.

O'Neal, M.E., Prasifka, J.R., Schmidt, N.P., Singer, J.W., Hellmich, R.L. and Kohler, K.A. 2005. Assessing Carabid contribution to ecosystem services: Does it matter if there are more beetles? *Amer. Entomol.* (in press)

Ouma, J.O., **Marquez, J.G.** and **Krafsur, E.S.** 2005. Macrogeographic structure of the tsetse fly, *Glossina pallidipes* (Diptera: Glossinidae). *Bulletin of Entomological Research* 95: 437- 447.

Ouma, J.O., **Marquez, J.G.** and **Krafsur, E.S.** Microgeographic breeding structure of the tsetse fly, *Glossina pallidipes* (Diptera: Glossinidae) in south-western Kenya. *Medical and Veterinary Entomology* (in press).

Phasuk, J., J. Chanpaisaeng, P.H. Adler, and **G.W. Courtney** 2005. Chromosomal and morphological taxonomy of larvae of *Simulium* (*Gomphostilbia*) (Diptera: Simuliidae) in Thailand. *Zootaxa* 1052: 49-60.

Sappington, T.W., Arnold, M.D., Brashears, A.D., Parajulee, A.D., Carroll, S.C., Knutson, A.E. and Norman Jr, J.W. 2006. Dispersal of boll weevils (Coleoptera: Curculionidae) from cotton modules before ginning. *J. Econ. Entomol.* (in press)

Schultz, G., Peterson, C.J. and **Coats, J.R.** 2006. Natural insect repellents: Activity against mosquitoes and cockroaches. *Natural Products for Pest Management*, vol. 927. Rimando and Duke, eds. (in press)

Out-of-state Travel

Lyric Bartholomay made a presentation at the Illinois Mosquito and Vector Control Association's annual meeting in Springfield, November 14-15. **Brad Tucker** was also in attendance.

Lyric Bartholomay attended the American Society of Tropical Medicine and Hygiene meetings in Washington D.C. from December 11-15.

Joel Coats led **Keri Henderson, Dingfei Hu, Kelsey Prihoda**, to present research findings at the annual meeting of the Society of Environmental Toxicology and Chemistry in Baltimore, MD, November 14-17.

Jerry DeWitt was a presenter at the USDA seminar on sustainable agriculture and communities in Washington D.C., December 3-6.

Richard Hellmich was invited by the Division of Plant Sciences, University of Missouri to present talk entitled. Bt Corn and Monarch Butterflies: Balancing Agricultural Realities with Ecological

Unknowns, Columbia, Missouri, in September. He was also invited to participate in EPA USDA sponsored conference on Agricultural Biotechnology Risk Analysis for BRAG grant award winners and make a presentation entitled Unintended Biological Effects of Plant Incorporated Protectants, Riverdale, Maryland, in November.

Russell Jurenka travelled to Beltsville, MD to attend the Binational Agriculture Research and Development (BARD) grant panel meeting.

Elliot Krafusur presented an invited paper ("Gene flow in tsetse: the genetic evidence") at the 54th meeting of the American Society of Tropical Medicine and Hygiene in Washington, D.C. He also participated in the third meeting of the "International *Glossina* Genomics Initiative" of WHO/TDR hosted by The Institute for Genomic Research in Rockville, Maryland, 15-17 December.

Linda Naeve traveled to Greensboro, NC to attend the National Small Farms Conference, October 16-19.

Matt O'Neal traveled to the Richardson Wildlife Center in Illinois to attend a meeting of entomologists who are planning and conducting research on soybean aphid management, September 16-20. He travelled to the NCR-125 (Biological Control of Arthropods and Weeds) annual meeting held in Chicago where he represented the State of Iowa and presented an overview of research and extension activities as it relates to the practice of biological control. This was a joint meeting with NCR-148 (Regional research group on Dispersal and Migration) and Dr. O'Neal gave an oral presentation to both groups entitled "Impact of habitat management on soybean aphid biological control".

Carol Pilcher attended the National IPM Committee Meeting in Washington D.C. and worked with the State IPM

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Coordinators and Regional IPM Center Directors on the National Evaluation of IPM, October 3-7. Later, Pilcher traveled to Chicago from October 17-19 to attend the National IPM Interagency Evaluation and Reporting Subcommittee meeting. She assisted with IPM Evaluation efforts by attending the Great Lakes Vegetable Working Group Meeting in Chesterton, IN on October 27.

Marlin Rice attended a strategic planning meeting of the Entomological Society of America as a member of the Executive Committee in Indianapolis, September 7-8. Rice then traveled to Baltimore on September 14 to attend the 2006 ESA budget meeting for his position as Secretary/Treasurer.

James Romer traveled to the Minnesota Landscape Arboretum in Chaska for a meeting with the Consumer Horticulture and Master Gardener Programs and Extension, November 9-11.

Wayne Rowley traveled to Reno to attend the International Congress of the Society of Vector Ecology meeting from September 30-October 6.

Tom Sappington participated in the annual NCR-148 Technical Committee (Migration and Dispersal of Agriculturally Important Biotic Agents) meeting as Iowa Co-Rep, Chicago, IL Oct 25-26. He then participated in Monsanto Company's Corn Rootworm IRM Workshop, held in St. Louis, MO Oct 27-28.

Nick Schmidt presented research at the North Central Region meeting on arthropod biological control in Chicago, October 25-27.

Mark Shour presented two talks (IPM for Everyone and IPM for Childcares) to the 2nd Healthy Indoor Environment conference, Kansas City, KS on October 13. He also presented at the Annual Pest Control Recertification

Short Course in Brookings, SD with topics of "Outsmarting Mice and Rats" and "Selling Integrated Pest Management in Schools and Other Sensitive Environments," November 2-4. Shour also traveled to Nebraska City for an Integrated Pest Management presentation on emerald ash borer at the central region's Woodlands Stewardship Conference, November 18-19.

Angela Tague took a professional trip to Purdue's campus in West Lafayette, IN for a visit to the Entomology Department, October 9-14.

Jon Tollefson traveled to Washington D.C. on September 28 to meet and lead a delegation from Serbia and Montenegro through their itinerary on pesticide regulation and use in the United States. Tollefson then escorted the group to Iowa State for a brief stay, October 2-5. The delegation, along with Tollefson, returned to Washington to complete the trip report and plan the next stage of the Serbian delegation's assistance of U.S. pesticide regulation, October 5-7.

Jon Tollefson was the invited speaker at the International Conference to celebrate the 60th anniversary of the Maize Research Institute in Belgrade, October 22-30.

Jon Tollefson participated in the Syngenta MIR604 Corn Rootworm Technology meeting in Chicago, December 4-5.

Annual meeting of the Entomological Society of America

Matt O'Neal traveled to Fort Lauderdale from December 14-19 to present research while leading graduate students in their presentations at the Entomological Society of America's annual meeting. **Lindsey Gereszek, Kevin Johnson, Nina Richtman, Nick Schmidt, Jeff Bradshaw, Wayne Ohnesorg, Ben Kaeb, Patti Prasifka**

and **Richard Hellmich** gave presentations. **Tom Sappington** presented a poster. **Jon Tollefson** participated in the meetings; Larry **Pedigo** received an award. **Marlin Rice** was also present to serve as Secretary/Treasurer to the Society.

International Travel

Man-Yeon Choi attended the fifth Asia-Pacific Congress of Entomology held in Jeju Korea, October 18-21, and gave a presentation entitled "Pheromone biosynthesis of *Helicoverpa* and *Heliothis* moths"

Richard Hellmich was invited to attend the International Symposium on Biological Control of Arthropods and present talk entitled Integration of Bt maize in IPM systems: U.S. perspective, Davos, Switzerland, September, 2005

Other

Patti Prasifka Presented at the ISU 2005 Integrated Crop Management Conference, November 30: J.J. Tollefson, P.L. Prasifka, and M.E. Rice. Is the Biology of Corn Rootworms Changing in Iowa?

John VanDyk has been selected for the Drupal Security Team. The team is responsible for identifying and responding to security flaws in Drupal, an open source software project. Drupal is the software behind the entomology department's website, which received 57,533,386 hits in 2005 (an average of 109 hits per minute).