



Personnel News

In September, **Meghan Minner** transferred within the USDA, ARS Unit from working with the European corn borer rearing lab to assisting Dr. Kim with population genetics studies on European corn borer and western corn rootworm. Meghan is an undergrad majoring in Biological/Pre-medical Illustration.

Kristine Schaefer, Extension Program Specialist III, joined the PME program on December 1 and will be conducting Pesticide Applicator Training Programs.

INCOMING STUDENTS

Jeff Alfred joined the Bartholomay lab as a Master's candidate. Jeff is a USDA employee working under the supervision of Drs. Jim Mertins and Joel Hutcheson. He will be working on developing a key to larval myiasis-causing flies.

GRADUATIONS

Ben Kaeb completed his M.S. in Entomology. Ben's thesis was "Management of the Grape Colaspis, *Colaspis brunnea* (Coleoptera:Chrysomelidae), in Seedcorn Production."

Nicholas Schmidt completed his M.S. in Entomology for completion of his thesis "Sampling and Management of Aphidophagous Natural Enemies in Iowa Soybean."

Arthit Nuntakuang, co-advised by **Greg Courtney**, completed his Ph.D. at Chiang Mai University, Thailand, in September. His thesis was entitled "Diversity and Biogeography of Caddisflies of Northern Thailand."

DEPARTURES

On November 9, **Joyce Hornstein** retired. She worked for the Pest Management and the Environment program for many years and at Iowa State for more than 30 years.

Awards and Honors

Bryony Bonning was elected to the Council of the Society for Invertebrate Pathology and will serve a two-year term as a Trustee.

Les Lewis was named the 2006 ARS Senior Research Scientist of the Year for the Midwest Area for an outstanding career in research on integrated pest management of insect pests of corn. The award is to annually recognize the creative efforts, scientific leadership, and the major research accomplishments of ARS research scientists.

Jim Oleson received a Special Achievement Award for his work related to corn production in Iowa. This award is given at the discretion of the dean of the College of Agriculture in recognition of exemplary service to corn/soybean production in Iowa.

Marlin Rice was elected by the membership of the Entomological Society of America as Vice-President Elect. He will serve as President during 2009.

Tom Sappington was invited to serve on the Scientific Advisory Board for the Journal of Applied Entomology.

Tom Sappington was invited to serve on the Western Corn Rootworm Ecology Expert Panel to identify research needs and draft a coordinated European research plan, EU Programme FP6-2004-SSP-4, "Harmonize the Strategies for Fighting *Diabrotica virgifera virgifera*."

The 2006 Department of Entomology Herbert Osborn Awardees for Professional Performance were **Nicholas Schmidt** (M.S. category) and **Matt Petersen** (Ph.D. category). Nick conducted research with Dr. Matt O'Neal, and Matt conducted research with Dr. Gregory Courtney.

John VanDyk received a certificate of appreciation in recognition of 10 years of service in ISU extension.



Recently Published

Bonning B.C. (editor). 2006. "Insect Viruses: Biotechnological Applications." *Advances in Virus Research* vol. 68. Academic Press, 532 pp.

Boyapalle S., Pal N., Miller W.A., and **Bonning B.C.** 2007. A glassy-winged sharpshooter cell line supports replication of *Rhopalosiphum padi* virus (Dicistroviridae). *Journal of Invertebrate Pathology* 94(2): 130-139.

Clark B.W., **Prihoda K.R.**, and **Coats J.R.** 2006. Subacute effects of transgenic Cry1Ab *Bacillus thuringiensis* corn litter on the isopods *Trachelipus rathkii* and *Armadillidium nasatum*. *Environmental Toxicology and Chemistry* 25(10):2653-2661.

Greenberg S.M., Sétamou M., **Sappington T.W.**, Liu T.-X., Coleman R.J., and Armstrong R.S. 2006. Circadian rhythms of feeding, oviposition, and emergence of the boll weevil (Coleoptera: Curculionidae). *Insect Science*. 13: 461-467.

Isaacs R., Mason K.S., Brewer M., Noma T., and **O'Neal M.E.** 2006. Does implementation of a selective blueberry insect control program enhance biological control? IOBC West Palaearctic Regional Section Bulletin 29 (10), 7-12.

Miller N.J., **Kim K.S.**, Ratcliffe S.T., Estoup A., Bourguet D., and Guillemaud T. 2006. Absence of genetic divergence between western corn rootworms (Coleoptera: Chrysomelidae) resistant and susceptible to control by crop rotation. *Journal of Economic Entomology* 99: 685-690.

O'Rourke M.E., Heggenstaller A.H., Liebman M., and **Rice M.E.** 2006. Post-dispersal weed seed predation by invertebrates in conventional and low-external-input crop rotation systems. *Agriculture, Ecosystems and Environment* 116: 280-288.

Ouma, J.O., **Marquez, J.G.**, and **Krafsur, E.S.** 2006. New polymorphic microsatellites in *Glossina pallidipes* and their cross amplification in tsetse fly taxa. *Biochemical Genetics* 44: 471-477.

Li H., **Tang H.**, Harrison R.L., and **Bonning B.C.** 2007. Impact of a basement membrane-degrading protease on dissemination and secondary infection of *Autographa californica* multiple nucleopolyhedrovi-

rus in *Heliothis virescens* L. *Journal of General Virology*. 88: 1109-1119

Liu Z., Ho L., **Bonning B.C.** 2007. Localization of a *Drosophila melanogaster* homolog of the putative juvenile hormone esterase binding protein of *Manduca sexta*. *Insect Biochemistry and Molecular Biology* 37(2): 155-163

Rice M.E. and **Veal D.A.** 2006. New distribution and adult host records for longhorned beetles (Cerambycidae) from Iowa. *Coleopterists Bulletin* 60: 255-263.

Prasifka J.R., **Schmidt N.P.**, **Kohler K.A.**, **Hellmich R.L.**, **O'Neal M.E.**, and **Singer J.W.** 2006. Effects of living mulches on predator abundance and predation on sentinel prey in a corn-soybean-forage rotation. *Environmental Entomology* 34: 1423-1431.

Prasifka J.R., **Sumerford D.V.**, **Hellmich R.L.**, **Lewis L.C.**, and **Calvin D.D.** 2006. Sampling European corn borer (Lepidoptera: Crambidae) larvae from seed corn drying bins for Bt resistance monitoring. *Southwestern Entomologist* 31: 269-279.

Zhu J., **Zeng X.**, **Yan, M.**, **Liu, T.**, **Qian, K.**, **Han Y.**, **Xue, S.**, **Tucker B.**, **Schultz G.**, **Rowley W.**, and **Zhang A.** 2006. Adult repellency and larvicidal activity of five plant essential oils against mosquitoes. *Journal of the American Mosquito Control Association* 22(3):515-522.

Publishing Activity (In Press)

Berntsen B.T., **Bartholomay L.C.**, and **Lowery R.J.** Penetration of the mosquito midgut is not required for *Brugia pahangi* microfilariae to avoid the melanotic encapsulation response of *Armigeres subalbatus*. *Veterinary Parasitology*.

Choi M-Y., **Fuerst E.**, **Rafaeli A.**, and **Jurenka, R.** 2007. Role of extracellular domains in PBAN/Pyrokinin GPCRs from insects using chimera receptors. *Insect Biochemistry and Molecular Biology*.

Coates B.S., **Sumerford D.V.**, **Hellmich R.L.**, and **Lewis L.C.** 2007. A b-1,3-galactosyltransferase and brainiac/bre5 homolog expressed in the midgut did not contribute to a Cry1Ab toxin resistance trait in *Ostrinia nubilalis*. *Insect Biochemistry and Molecular Biology*.



Courtney G.W. 2007. Blephariceridae. In Brown B.V., Borkent A., Wood D.M., and Zumbado M. (editors). *Manual of the Diptera of Central America*. National Research Council Press, Ottawa, Ontario, Canada.

Courtney G.W. 2007. Book review: Yeates D.K., and Wiegmann B.M. (editors). 2005. *The Evolutionary Biology of Flies*. Columbia University Press, New York. 430pp. *Annals of the Entomological Society of America*.

Courtney G.W., and R.W. Merritt. 2007. Aquatic Diptera: Part one: Larvae of aquatic Diptera. *In* Merritt R.W., Cummins K.W., and Berg M.B. (editors). *An Introduction to the Aquatic Insects of North America*. Fourth Edition. Kendall / Hunt Publishing Co. Dubuque, Iowa.

Courtney G.W., Merritt R.W., Cummins K.W., and Webb D.W. 2007. Ecological and distributional data for larval aquatic Diptera. *In* Merritt R.W., Cummins K.W., and Berg M.B. (editors). *An Introduction to the Aquatic Insects of North America*. Fourth Edition. Kendall / Hunt Publishing Co. Dubuque, Iowa.

Greenberg S.M., Sappington T.W., Sétamou M., Armstrong J., Coleman R.J., and Liu T.-X.. 2006. Reproductive potential of overwintering , F1, and F2 female boll weevils (Coleoptera: Curculionidae) in the Lower Rio Grande Valley of Texas. *Environmental Entomology*.

Hogdson E., McCornack B.P., Koch K.A., Ragsdale D.W., Johnson K.D., O'Neal M.E., Cullen E., Kraiss H., DiFonzo C.D., and Behnken L.M. 2006. Field validation of Speed Scouting for soybean aphid. *Plant Management Network*.

Jurenka R., Terblanche J.S., Klok C.J., Chown S.L., and Krafur E.S. 2007. Cuticular lipid mass and desiccation rates in *Glossina pallidipes*: Inter-population variation. *Physiological Entomology*.

Rafaeli A., Bober R., Becker L., Choi M.-Y., Fuerst E.-J., Jurenka R. 2007. Spatial distribution and differential expression of the PBAN receptor in tissues of adult *Helicoverpa* spp. (Lepidoptera: Noctuidae). *Insect Molecular Biology*.

Schmidt N.P., O'Neal M.E., and Singer J.W. Is conservation biological control of *Aphis glycines* Matsumura (Hemiptera: Aphididae) possible in North America? *Environmental Entomology*.

Tillman P.G., Prasifka J.R., and Heinz K.M. 2006. Rubidium marking to detect pest and predator dispersal from corn into sorghum and cotton in Georgia. *Journal of Entomological Science*.

Prasifka P.L., Hellmich R.L., Prasifka J.R., and Lewis L.C. 2006. Effects of Cry1Ab-expressing corn anthers on the behavior of monarch butterfly larvae. *Environmental Entomology*.

Prasifka J.R., Lopez M.D., Hellmich R.L., Lewis L.C., and Dively G.P. 2006. Comparison of pitfall traps and litter bags for sampling ground-dwelling arthropods. *Journal of Applied Entomology*.

Extension, Educational, Technical Publications

Shour, Mark. Revision of PM 1265e: Dispose of Pesticides Properly, Safe Farm Series.

Shour, Mark. Revision of PM 1518a: Work toward Zero Pesticide Storage, Safe Farm Series.

Shour, Mark. Revision of Commercial Pesticide Applicator Manual for Category 8: Public Health Pest Control, CS23.

Hill J.H., Bradshaw J.D., and Rice M.E. 2006. Virus in your beans: What to do? *Proceedings of the 18th Annual Integrated Crop Management Conference*, pp. 113-118. *Integrated Crop Management Conference*, Ames, IA. Iowa State University, Ames.

Rice M.E. 2006. Eastern movement of the western bean cutworm into Indiana and Ohio. *2006 Indiana Certified Crop Advisor Conference Proceedings*, Purdue University, Indianapolis, IN. CD-AY-7, 9 pp.

Rice M.E. 2006. Focus on insects: Snapshots of newly published research in agricultural entomology. *Proceedings of the 18th Annual Integrated Crop Management Conference*, pp. 173-180. *Integrated Crop Management Conference*, Ames, IA. Iowa State University, Ames.

Rice M.E. 2006. Integrated Pest Management 101: Corn-damaging caterpillars. *Proceedings of the 18th Annual Integrated Crop Management Conference*, pp. 73-74. *Integrated Crop Management Conference*, Ames, IA. Iowa State University, Ames.



Rice M.E., and Dorhout, D.L. 2006. Western bean cutworm in Iowa, Illinois, Indiana and now Ohio: Did biotech corn influence the spread of this pest? Proceedings of the 18th Annual Integrated Crop Management Conference, pp. 165-172. Integrated Crop Management Conference, Ames, IA. Iowa State University, Ames.

Out-of-state Travel

Lyric Bartholomay and Gerardo Marquez traveled to Atlanta, GA, November 12-15 to attend the annual meeting of the American Society of Tropical Medicine and Hygiene.

Bryony Bonning visited Dow Agrosiences in Indianapolis on December 13 to give a seminar and to discuss collaborative research.

Joel Coats traveled to San Francisco, CA, September 9-15 to attend the American Chemical Society Meetings where he served as the Agro Division Counselor. Lindsey Gereszek, Keri Henderson, Gretchen Paluch, Dingfei Hu, Hirofumi Kosaki, Kelsey Prihoda and Vera Williams also participated.

Joel Coats was in Atlanta, GA, October 19-21 to serve on the Scientific Advisory Panel of EcoSmart Technologies, Inc., and present research data.

Greg Courtney and Matt Petersen traveled to Utah State University-Logan to attend the Freshwater Invertebrate DNA-Signature Workshop, November 28 to December 1.

Rick Hellmich attended a Research Committee Meeting of NCR-148 (Migration and Dispersal of Biota) at Pennsylvania State University, State College, PA, in October. He also participated in an EPA technical workshop, Explore Ecological Impacts from Plant-incorporated Protectants and Research Project Development, held in Corvallis, OR, in December.

Linda Naeve traveled to Raleigh, NC, to attend the SR-PSEC workshop September 17-20.

Matt O'Neal hosted and attended the NCERA-125 (Biological Control of Arthropods and Weeds) meeting held in Des Moines, IA, on October 24-25. Matt was elected Chair of NCERA-125 for 2007.

Carol Pilcher was in Washington, DC, from October 2-6 to attend the National IPM Committee Meeting 4

and present work on IPM evaluation. She traveled to Kansas City, MO, October 10-13 to attend the Soil and Water Conservation Society workshop Managing Agricultural Landscapes for Environmental Quality to learn about environmental indicators used by NRCS. Carol was in Denver, CO, October 17-25 to conduct three workshops on IPM Program Evaluation, then traveled to St. Louis, MO, to attend the NC IPM Center Stakeholder meeting October 25-27. She went to Dallas, TX, to the National IPM Interagency Meeting November 13-15, where she presented results of research conducted during the past year on IPM Evaluation. She was in Portland, OR, October 31 to November 5 attending the American Evaluation Association Annual Meeting and a one-day workshop on implementing the logic model for program evaluation.

Patti Prasifka traveled to San Diego January 10-12 for a planning meeting for the 2007 Annual Meeting of the Entomological Society of America. Patti and Rayda Krell will be serving as the Technology/Local Arrangements Committee Co-chairs for the meeting.

Marlin Rice traveled to Washington, DC, from September 26-28 to attend the Entomological Society of America Committee on Finance budget meeting and serve as the treasurer to the Society. He also participated in the Indiana Certified Crop Advisor Conference as an invited speaker in Indianapolis, IN, December 19-20.

Tom Sappington attended the NCERA-148 Committee on Migration and Dispersal of Agriculturally Important Biota, annual meeting, held on October 23-24 at State College, PA. Tom was at an ARS-sponsored Genome Mapping Workshop held in Lubbock, TX, October 25-26. On December 6, he attended a Ph.D. Committee meeting for Megan O'Rourke at Cornell University, Ithaca, NY.

Mark Shour traveled to Maumee, OH, to participate in a bark peeling workshop in preparation for the emerald ash borer in Iowa. He was in Las Vegas, NV, October 22-26 to participate in a national work group to develop pest management strategic plans for school IPM funding from the USDA. Mark was an invited speaker for the 3rd Healthy Indoor Environments Conference in Kansas City, KS.

Jon Tollefson traveled to Washington, DC, September 14-18 to escort the Borlaug Fellows from Serbia, Montenegro, and Bulgaria through USDA in Washington and on to ISU.



Vera Williams traveled to Vandalia, MO, September 15-16 to meet with a Vandalia watershed group to set up the field project for her PhD research.

Annual Meeting of the Entomological Society of America

Bryony Bonning, Joel Coats, Donald Lewis, Matt O'Neal, Marlin Rice, Jon Tollefson, Patti Prasifka, Jeff Bradshaw, Nick Schmidt, Richard Hellmich, Kevin Johnson, Wayne Ohnesorg, Huarong Li, Sijun Liu, S. Sivakumar, Dave Dorhout, Lindsey Gereszek, Gretchen Paluch, Matt Peterson, Patti Prasifka, Melinda Thede, Jessica Davis, and Matt Petersen traveled to Indianapolis, IN, December 10-14 to attend and participate in the Annual Meeting of the Entomological Society of America. Patti served on the Technology Committee.

Jon Tollefson traveled to Belgrade, Serbia, September 29 to October 6 to work with the Ministry of Agriculture Plant Protection Directorate to edit pesticide safety manuals.

Jon Tollefson traveled to Amsterdam, Netherlands, November 20-26 to participate as a U.S. consultant to the Pesticide Sub-Group of the European Union Diabrotica Management Coordination Project.

International Travel

Joel Coats traveled to Jeju, South Korea, September 23-30 to give a talk on biosafety of genetically modified crops.

Joel Coats traveled to Montreal, Quebec, November 5-9 to attend the Annual Meeting of Toxicology and Chemistry of North America. He was invited to give a presentation on transgenic gene products in the environment. **Kelsey Prihoda, Keri Henderson, and Hirofumi Kosaki** also attended and presented at the meeting.

Greg Courtney and **Matt Peterson** traveled to Fukuoka, Japan, to attend the International Congress of Dipterology from September 21- October 1.

Rick Hellmich participated in a workshop on Environmental Risk Assessment, sponsored by the United States Trade and Development Agency (USTDA) and China Agricultural Biotechnology Project, held in September in Beijing, China.

Rick Hellmich, Tom Sappington, Jon Tollefson, and Marlin Rice participated in the 22nd Conference of the International Working Group on Ostrinia and Other Maize Pests (IWGO) held in Vienna, Austria, November 6-8.