



Arrivals/New Personnel

Lindsey Ehrler, a student in the Program for Women in Science and Engineering, worked in the Bonning lab for the summer. Lindsey worked with Dr. Sijun Liu and determined the time taken for plant viruses to enter the aphid hemocoel.

Umut Toprak from the University of Ankara, Turkey worked in the Bonning lab for a month to learn various baculovirus techniques.

Incoming Students

Wayne Ohnesorg is a new M.S. candidate in the Soybean Entomology laboratory. Dr. O'Neal will serve as his advisor while he studies the potential role for reduced-risk insecticides to conserve beneficial insects and effectively manage soybean aphids.

Jessica Orlofske was accepted as a Ph.D. student in Entomology / Ecology and Evolutionary Biology. She will rotate through Greg Courtney's lab during Fall 2005 and through Diane Debinski's lab during Spring 2006..

Lindsey Gereszek from Bismarck, North Dakota joined the Coats lab as an M.S. student. She has a B.S. in Biochemistry and worked previously for the soybean project as an hourly lab assistant. She is majoring in Toxicology & Biochemistry. Don Beitz (Biochemistry) is her co-major professor. Lindsey's project is to study the effects of an unusual fatty acid on insect growth, development, reproduction, and lipid profiles.

Hirofumi Kosaki joined the Coats lab as an M.S. student (Toxicology). He has a B.S. in Pesticide Toxicology from Chiba University in

Awards and Honors

Keri Henderson, a student in the Coats lab, has received a U.S. EPA STAR Fellowship for the duration of her Ph.D. program. The purpose of the fellowship program is to encourage promising students to obtain advanced degrees and pursue careers in an environmental field. This goal is consistent with the immediate and long-term mission of EPA, to protect public health and the environment. The STAR fellowship program has proven to be beneficial to both the public and private sectors by providing a steady stream of well-trained environmental specialists to meet environmental challenges in our society.

Keri Henderson, Dingfei Hu, Gretchen Schultz, Kelsey Prihoda, and Lindsey Gereszek all received the American Chemical Society (ACS) Education Award for Graduate Student Travel to the Fall ACS meeting in Washington, DC in the Agrochemicals Division.

Japan. **Jeff Wolt** (Agronomy) will serve as his co-major professor. His project deals with development of methodology for quantifying residues of biopharmaceutical proteins in environmental matrices.

Vera Williams from Missouri joined the Coats lab as a Ph.D. student (Toxicology). She has a B.S. in Chemistry from Missouri Western State and an M.S. in Water Resources from Iowa State. She comes with considerable experience working for the EPA Regional Office in Kansas City and the Iowa DNR. Her project will address the environ-



mental fate of atrazine in phytoremediation systems.

Fan Tong joined the Coats lab as a Ph.D. student (Toxicology). He received his B.S. in Biology and an M.S. in Zoology from Nankai University in China. He has received a Biotechnology Fellowship at ISU. His research will address the mechanism of action of monoterpenoid insecticides in insects.

Departures

Graduations

Sandhya Boyapalle graduated with her Ph.D. in Microbiology in May. Sandhya was co-supervised by Bryony Bonning and Allen Miller (Plant Pathology). The title of her dissertation was, "A cell culture system and the production of an infectious clone of *Rhopalosiphum padi virus* (Dicistroviridae)." Sandhya has taken a postdoctoral position at the H. Lee Moffitt Cancer Center & Research Institute, University of South Florida.

Brad Coats graduated in August with a Ph.D. in Genetics. The title of his dissertation was, "Genomic markers for the study of *Ostrinia nubilalis* population dynamics and traits conferring resistance to *Bacillus thuringiensis* (Bt) crystalline toxins." Brad has now begun a postdoctoral position with Rick Hellmich.

Greg Curler completed his M.S. with Greg Courtney in July. His thesis was entitled, "A review of the moth flies (Diptera: Psychodidae) of northern Thailand, with a revision of the world species of the genus *Neotelmatoscopus* Tonnoir (Psychodinae: Telmatoscopini)." Greg is now working on a Ph.D. at the University of Tennessee.

Tyasning Nusawardani completed her M.S. degree in the Bonning lab in May and is now pursuing a Ph.D. on polydnviruses with Dr. Bruce Webb at University of Kentucky. The title of her thesis is "Effects of a protease-

expressing recombinant baculovirus insecticide on the parasitoid *Cotesia marginiventris* (Cresson)."

Jumnongjit (Dang) Phasuk, co-advised by Greg Courtney, completed her Ph.D. at Kasetsart University, Thailand, in May. Dang's thesis was entitled, "Diversity of Lotic Diptera at Khao Yai National Park, Thailand, with Emphasis on the Morphology and Cytogenetics of Black Flies (Simuliidae)." Dang recently joined the museum staff at the Queen Sirikit Botanical Garden, Thailand, where she will work primarily on aquatic Diptera.

Penkhae Thamsenanupap, co-advised by Greg Courtney, completed her Ph.D. at Chiang Mai University, Thailand, in May. Penkhae's thesis was entitled, "Changes in Rheophilic Insect Communities and Trophic Relations of Selected Taxa Along an Altitudinal Gradient in Doi Inthanon and Doi Suthep-Pui National Parks." Penkhae recently accepted a faculty position at Mahasarakham University, Thailand.

Publishing Activity

Published/In Press

Arnold, A.E., and Lewis, L.C. 2005. Ecology and evolution of fungal endophytes and their roles against insects, in *Insect-Fungal Associations, Ecology and Evolution*. Vega, F.E., and Blackwell, M. (eds.) Oxford University Press, New York, New York. p. 74-96.

Choi, M-Y., Groot, A. and **Jurenka, R.A.** 2005. Pheromone Biosynthetic Pathways in the moths, *Heliothis subflexa* and *Heliothis virescens*. *Archives of Insect Biochemistry and Physiology*, 59: 53-58.

Coates, B.S., **Hellmich, R.L.**, and **Lewis, L.C.** 2005. Two differentially expressed *Ostrinia nubilalis* ommochrome-binding protein-like genes (*obp1* and *obp2*) in larval fat body. *J Insect Sci* 5:19.



Coates, B.S., Hellmich, R.L., and Lewis, L.C. 2005. Sequence variation in trypsin- and chymotrypsin-like cDNAs from the midgut of *Ostrinia nubilalis*: Methods for allelic differentiation of candidate *Bacillus thuringiensis* resistance genes. *Insect Mol. Biol.* (In Press)

Curler, G.R., J. Phasuk, J. Chanpaisaeng, and G.W. Courtney. A new species of *Horaiella* Tonnoir (Diptera: Psychodidae) from Thailand. *Proceedings of the Entomological Society of Washington.* (in press)

Kim, K.S. and T.W. Sappington. 2005. Molecular genetic variation of boll weevil populations in North America estimated with microsatellites: Implications for patterns of dispersal. *Genetica* (In press)

Krafsur, E.S., Obrycki, J.J., and Harwood, J.D. 2005. Comparative genetic studies of native and introduced Coccinellidae in North America. *European Journal of Entomology* 102: 469-474.

Lopez, M.D., Prasifka, J.R., Bruck, D.J., and Lewis, L.C. Utility of ground beetle species as indicators of potential non-target effects of Bt crops. *Environ. Entomol.* (In Press).

Lewis, L.C., Gunnarson, R.D., and Robbins J.C. *Trichogramma brassicae* (Hymenoptera: Trichogrammatidae) and SLAM, an integrated approach to managing European corn borer and corn rootworms. *BioControl* (In Press).

Lewis, L.C., Sumerford, D.V., and Gunnarson, R.D. Dynamics of *Nosema pyrausta* in natural populations of the European corn borer, *Ostrinia nubilalis*. *BioControl* (In Press).

Liu, S., Bonning, B.C., and Miller, W.A. A simple wax-embedding method for isolation of aphid hemolymph for detection of luteoviruses in the hemocoel. *J. Virol. Methods.* (in press).

Nusawardani, T., Ruberson, J.R., Obrycki, J.J., and Bonning, B.C. 2005. Effects of a protease-expressing recombinant baculovirus insecticide on the parasitoid *Cotesia marginiventris* (Cresson). *Biological Control* 35(1):46-54.

O'Neal, M.E., J.R. Prasifka, N.P. Schmidt, J.W. Singer, R.L. Hellmich, and K.A. Kohler. Assessing carabid contribution to ecosystem services: does it matter if there are more beetles? *American Entomologist.* Accepted as part of an Instant Symposium "Ground beetle (Coleoptera: Carabidae) ecology: their function and diversity in natural and agricultural habitats." J. Lundgren, organizer. *In press.*

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

Rozkošný, R. and G.W. Courtney. New records of *Ptecticus* species from Thailand including description of a new species (Stratiomyidae, Diptera). *Acta Zoologica Academiae Scientiarum Hungaricae* (in press)

Sappington, T.W. 2005. First-flight adult European corn borer (Lepidoptera: Crambidae) distribution in roadside vegetation relative to cropping patterns and corn phenology. *Environmental Entomology* (In press)

Thamsenanupap, P., P. Chantaramongkol, and G.W. Courtney. Diversity and seasonal occurrence of rheophilic caddisflies in mountain streams in Chiang Mai, Northern Thailand. *Proceedings of the 11th International Symposium on Trichoptera, Osaka, Japan.* (in press)

Theimann, D.A., Blissard, G.W., Bonning, B.C., Jehle, J., O'Reilly, D.R., Rohrmann, G.F., Thiem, S. and Vlaskovits, J.M. 2005. Baculovirus taxonomy. In: 8th International Committee for Taxonomy of Viruses.



Extension, Educational, Technical Publications

www.soybeanaphid.info; a new website created by **Drs. O'Neal** and **VanDyk** and moderated by Dr. O'Neal in which information regarding soybean aphid management and biology is presented for growers and agribusiness professionals..

Out-of-state Travel

Bryony Bonning traveled to Anchorage Alaska to present three oral presentations at the annual meeting of the Society for Invertebrate Pathology. She also served as Program Chair for the meeting.

Bryan Clark, Kelsey Prihoda, Dingfei Hu, and **Lindsey Gereszek** traveled to Carbon-dale, IL to the joint meeting of the Ozark-Prairie and Midsouth regions of the Society of Environmental Toxicology and Chemistry to give talks on research. **Keri Henderson** also attended to present original research and to participate as Board Secretary of the Ozark-Prairie region, May 16-18.

Man Yeon Choi traveled to Washington, DC, to attend the 21st Annual Meeting of the International Society of Chemical Ecology, July 23-27.

Joel Coats led a field trip with Entomology Club students to study and collect insects in Arkabutla, MS, May 10-14. He also served as an external consultant to the US Army/USDA/NIH/BASF Mosquito Repellents Project during their summer meeting in College Park, MD, July 24-26.

Greg Courtney traveled to Oregon from 27 July – 18 August, where he conducted field work and participated in two conferences. At the first conference, *Wetland Ecology and Wildlife: Considerations for Wetland Restoration and Management*, held at Malheur Field Station, Dr. Courtney gave a presentation en-

titled, “Fundamentals of aquatic invertebrate ecology, with emphasis on aquatic insects.” The second conference, a meeting of the *North American Dipterist Society*, was held the following week, also at Malheur Field Station. He hosted this meeting and gave an introductory presentation on Malheur Wildlife Refuge, Steens Mountain, and the Alvord Basin. Other NADS meeting attendees included **Vladimir Blagoderov, Matthew Petersen, Rebecca Brown, Greg Curler, and Amanda Jacobsen**. Dr. Courtney then led a post-meeting tour of H.J. Andrews Experimental Forest in the Cascade Range of western Oregon. Blagoderov, Petersen, and Brown also participated in this activity.

Jerald DeWitt made a presentation in Chicago on organic agriculture to the State Departments of Agriculture. He then went on to Washington, DC, to work on national sustainable agriculture at the USDA, April 29-May 9. Dr. DeWitt also served on a regional IPM project review panel in Chicago, IL, May 25-26. He later interviewed SARE farmer grant awardees for the USDA SARE program in Frankfort, KY, June 22-26. The NC regional SARE PDP program had him travel to Kansas City to review proposals, July 11-12. He then traveled to Atlanta, GA to review three sustainable agriculture projects for the USDA in Georgia and Alabama, July 22-26. Dr. DeWitt attended the Regional Pesticide Applicators Workshop in Madison, WI, to make a presentation, August 15-18.

Keven Arrowsmith, Jerry DeWitt, Joyce Hornstein, Linda Naeve, Beth Minner, Carol Pilcher, Kristine Schaefer, and Mark Shour attended the 2005 North American Pesticide Applicator Certification and Safety Education Workshop in Madison, WI. Over 200 persons from 48 states and 2 Canadian provinces participated in this 3-day event August 16-19, 2005. In addition to participation in the workshop, Dr. Shour was in charge of the exhibits and posters area and local arrangements.



Matt O'Neal traveled to the University of Minnesota in Minneapolis to learn experimental techniques in the laboratory of Dr. David Ragsdale, July 26.

Matthew Petersen traveled to Gatlinburg, TN, for his fieldwork and collection in the Great Smoky Mountains National Park, May 8-23.

Carol Pilcher traveled to Portland, OR, to meet with members of the IPM Indicators Working Group and assisted with Program Evaluation of IPM, August 29-31.

Marlin Rice participated in the Executive Committee meeting of the Entomology Society of America in association with the American Phytopathological Society in Minneapolis, MN. The meeting was arranged to discuss professional items of mutual interest, May 3-5. He later traveled to Washington, DC, to attend the Governing Board Meeting of the Entomology Society of America, May 10-13. Dr. Rice also traveled to Warsaw, MO, to photograph insects and spiders for a field guide to be published on arthropods of the Midwestern United States, July 27-30.

Tom Sappington traveled to State College, PA, May 17-18, to plan experiments with scientists at Penn State and ZedX, Inc. During July and August, Dr. Sappington and his staff made weekly trips to collect European corn borer moths along transects terminating in IL, MO, NE, and MN.

Jon Tollefson attended an Administrative Development Workshop for new administrators in Lincoln, NE, June 6-9.

John VanDyk travelled to the O'Reilly Open Source Convention in Portland, OR August 2-5. He gave a presentation on the Content Construction Kit for the Drupal web content management system and spent time designing a form application programming interface with project leads from Belgium, Canada and South Africa.

International Travel

Bryony Bonning traveled to visit with Dr. John Gatehouse, University of Durham, UK, in May for coordination of ongoing collaborative research and grant proposals, and presentation of research to the Department of Biological Sciences.

Jeff Bradshaw was teaching assistant and group co-leader for the field trip in Biology 394B "Natural History of the Serengeti." The Field trip was to northern and northeast Tanzania and lasted from May 30 to June 16.

Rebecca Brown prepared for a future extensive research stay in Antananarivo, Madagascar, May 21-June 7, and is making plans for a return trip in January.

Joel Coats participated as a member of the Scientific Advisory Panel of EcoSmart Technologies, Inc. in Vancouver, BC, May 23-25. Dr. Coats met with Agricultural officials in Belgrade, Serbia, and offered advice on pesticides wastes and residues, June 18-22.

Gregory Courtney traveled to Chiang Mai University in Bangkok on a collaborative research visit regarding the NSF Biotic Survey and Inventories Project. He participated in two Ph.D. defenses: (1) Penkhae Thamseanupap, Chiang Mai University; and (2) Jummongjit Phasuk, Kasetsart University and also devoted several days to working on manuscripts with students and other colleagues. He then presented a seminar at Chiang Mai University entitled, "The role of woody debris in stream ecosystems."

Greg Courtney traveled to Denmark from 18-24 July, where he participated in a workshop (*NSF Assembling the Tree of Life — Diptera project*) at the Zoological Museum in Copenhagen. He then gave a presentation and led discussions on "Morpho-phylogenetic data on lower Diptera."



Bethzayda Matos traveled to Magog, Canada, to attend and present a paper at the International Organization for Biological Control annual meeting, May 8-14.

Jon Tollefson met with agricultural officials in Belgrade, Serbia and provided advice on corn rootworm management, June 18-27.

Brad Tucker traveled to Beijing, China for collaborative WNV research with the Beijing Center for Disease Prevention and Control, June 14-29.

Other

During July, the Soybean Entomology laboratory established suction traps across Iowa for the monitoring and continued research of soybean aphid movement and abundance. The website <http://www.ncipmc.org/traps/> presents a map showing suction trap location and weekly counts of winged soybean aphids.

Jeff Bradshaw was appointed by the Graduate and Professional Student Senate to serve as student representative on the University's Study Abroad and Exchange Advisory Committee.

EGSO Officers for 2005-06

President: **Rebecca Brown**

Vice President: **Nick Schmidt**

Secretary: **Amanda Jacobson**

Treasurer: **Gretchen Schultz**

Graduate Student Senator: **Ben Kaeb**